Clinical Lecture
ON
DYSPNŒA, ESPECIALLY ON THE DYSPNŒA OF ASTHMA AND BRONCHITIS, AND THE EFFECTS OF THE NITRITES UPON IT.

Delivered in the Edinburgh Royal Infirmary, December 17th, 1886,

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GENTLEMEN,—In the study of disease in the wards of the infirmary your attention is very frequently drawn to the occurrence of dyspnœa, or difficulty in breathing. You have seen that it presents itself in various forms and degrees, in various conditions of the patient, and in connexion with many diseases. We have together studied several of its forms and varieties. We have seen it associated with disease of the heart, with morbid changes in the larger air passages, with pain in the thorax, and with diseases of the lungs; and it has been our endeavour to distinguish in each case any peculiarities in the phenomena which accompany it. We have seen, for instance, in cardiac disease, that it is associated with evidence of valvular lesions, or of dilatation of the heart, or of disease of the large bloodvessels that it is frequently paroxysmal, the paroxysms being induced by physical exertion or mental excitement, although even in the interval between each exacerbation it does not altogether depart; and that pain in the region of the heart or extending into the shoulders and arms is often one of its superadded miseries. In disease of the larger air passages, such as œdema or spasm of the glottis, constriction of the trachea, or paralysis of the vocal cords, we have several times observed that the great difficulty in respiration seems to occur during inspiration, which is laboured and prolonged, while the expiration is relatively brief and without effort. In thoracic pain of pleuritic or neuralgic origin, the attitude of the patient, and especially the modifications in posture and movement adopted by him, are almost sufficient to characterise the dyspnœa apart from the readily discoverable conditions by which the pain is induced. In asthma, the opportunities for investigating the phenomena have not been altogether favourable, as our cases have presented the peculiarity, which so frequently occurs in this disease, that the dyspnœa has made its appearance only during the night or early morning. Most of you, however, are familiar with the circumstances that in asthma the dyspnœa is characterised by loud wheezing sounds and great prolongation of expiration, that it is paroxysmal in its manifestation, leaving the patient free or nearly so from all symptoms of breathlessness in the intervals, and that no structural alterations have as yet been discovered to account for the intense distress which marks each paroxysm. On the other hand, examples of the dyspnœa of bronchitis have been abundantly presented to you for consideration. You have seen that it is associated sometimes with acute, sometimes with chronic inflammation of the bronchial tubes, that it very frequently occurs in patients suffering from emphysema, that it is often paroxysmal, and that it is accompanied with pain or uneasiness over the front of the chest, with a sputum that may be tenacious or frothy and watery, and with such auscultatory phenomena as rhonchi and sibilations, crepitations, and prolonged expiration.

While the dyspnœa in each of these conditions would supply abundant material for full and elaborate discussion, my intention to-day is to consider with you in further detail some of the phenomena presented by it in bronchitis and asthma only. I make this selection because our attention has been given in a more special manner during the last few weeks to a consideration of the breathlessness of these two diseases. I group them together because the dyspnœa frequently presents in them many points of similarity, and when it does so I believe that a large element in its production is an element operating in both diseases.

It is in pure (or nervous) asthma that dyspnœa assumes the most intense degree possible in disease of the respiratory apparatus. When the paroxysm occurs at night, the patient may go to bed feeling quite well, but is awakened from sleep by a feeling of suffocation. He sits up in bed in various constrained positions, or he is impelled to leave his bed altogether and walk about, resting now and again to recover strength. He struggles violently for breath; inspiration and expiration succeed each other rapidly for a short time; then expiration becomes brief, the chest seems to become rigid in full expiration, violent respiratory efforts are made, with but little change in the volume of the thorax, and the extraordinary muscles of respiration are brought into play with very inadequate results. After this state of distress has lasted for some time, it may be for hours, relief is obtained, and the patient returns to bed and usually soon falls asleep; but on many occasions this sleep may in a short time be again interrupted by a recurrence of the paroxysm. The great difficulty in asthma seems to be to expel air from the chest, and the expiratory muscles are strained to the utmost in the effort to accomplish this. If the condition of the patient during the period of dyspnœa be further examined, several other phenomena of significance are observed. The normal relationship between inspiration and expiration is found to be reversed, and in place of inspiration being longer than expiration, the latter seems sometimes to be two or three times as long as inspiration. The contrast with dyspnœa produced by constriction of the glottis or trachea, where inspiration is greatly lengthened in its duration, is therefore a very pronounced one. The diaphragm, further, is unduly low, the chest is expanded, and the percussion note is markedly resonant; while, on auscultating the chest, not only is confirmation obtained of the great prolongation of expiration, but every variety of dry râle is heard, snoring, creaking, and whistling sounds displacing each other in different parts of the chest.

Now, what is the cause of this intense dyspnœa? No anatomical lesions, as I have stated, have been found that are sufficient to account for it. It was explained by Willis, and subsequently by Cullen, Romberg, Salter, and others, as due to a spasmodic affection of the muscles and nerves of respiration, and especially of the muscles in the bronchi; and this explanation was generally coincided in for more than half a century. It has not, however, been allowed to remain in undisputed possession of the field, for at various times other and opposing explanations have been advanced. For example, Leyden considered that the asthmatic dyspnœa is caused by irritation of the vagus terminations in the bronchi produced by minute sharp-pointed crystals; but this explanation, after all, involves the production of a spasmodic constriction of the bronchi by reflex irritation. Wintrich denied that spasmodic contraction of the bronchi is possible, and maintained that the only explanation consistent with the phenomena is to be found in tonic spasm of the diaphragm, or of the diaphragm aided by the other ordinary muscles of respiration. Traube, Weber, and Sir Andrew Clark have ascribed the paroxysm to sudden congestive swellings of the bronchial mucous membrane, through the agency of vaso-motor nerves, the changes produced being likened by Clark to the swellings of the skin in nettle rash.

These views represent the more important of the contending explanations that have been advanced. It cannot be pretended that any single explanation has yet been established by the evidence that has been produced in its favour, although I think that the explanation which accounts for the essential phenomena of an asthmatic paroxysm by spasmodic contraction of the bronchial muscles is still the most generally accepted one. But while a spasmodic influence has thus been fully recognised in the production of the dyspnœa and of other of the essential phenomena of asthma, the existence of a spasm element in bronchitis has been but partially acknowledged. Indeed, so far as my acquaintance with the literature of this disease is concerned, spasm of the bronchial muscles is by the greater number of writers ignored as a condition that is ever, much less that is frequently, present. Bronchitis, however, resembles asthma in so far, at least, that in a considerable number of cases dyspnœa is frequently an important sym-

ptom, and that rhonchi and sibilations are among the most significant of its phenomena. The production of these râles has generally been attributed to stenosis of the bronchial tubes caused by engorgement, or swellings, or puckerings of the lining membrane, or to deposits of adhesive mucus upon this membrane.

It cannot, gentlemen, be too frequently impreseed upon your consideration that the ultimate objects of all our observations, studies, and investigations in pathology and medicine are the relief of suffering and the cure of disease. These objects will be the more certainly accomplished, the more accurate is our knowledge of the conditions that produce the symptoms of the diseases. I am not without hope that an illustration of this almost self-evident proposition may be found in some facts bearing upon the causation of the dyspnœa in asthma and in bronchitis, which I shall now proceed to describe. Let me first remind you that there are several well-recognised homologies in the structure and nerve connexions of the bronchi and of the smaller blood-vessels. They both contain non-striped muscle, and both are innervated by partly independent centres distributed in their walls, and by nerves proceeding to and from centres remote from themselves.

Although the effects of pharmacological agents upon the functions of the muscle and nerves of bloodvessels have been elaborately studied, their effects upon the functions of these structures in the bronchi have been but little investigated. Among the most striking of the results that have been obtained by pharmacology in the study of the influence of agents upon the bloodvessels is the demonstration that various nitrites cause a dilatation of the bloodvessels by an action restricted to the bloodvessels themselves. It was suggested to me by this fact that light might be thrown upon the production of dyspnœa in asthma and bronchitis by examining how far the dyspnœa and some of its associated phenomena could be modified by the action of nitrites. It seemed to be of importance to include in this observation not only the influence upon the dyspnœa (for any influence on it alone might be explained by an action upon nerve structures remote from the bronchi themselves), but also the influence upon the associated phenomena which have their seat of origin, without doubt or ambiguity, in the bronchi themselves. The associated phenomena, to which I attach the greatest importance, are the dry râles, audible in these diseases when the chest is auscultated, and conspicuously present along with the dyspnœa.

The first observation I made with these objects in view was in 1880, on a patient twenty-two years of age, of markedly nervous diathesis, who had suffered from asthma for several weeks. The chest was auscultated during an asthmatic paroxysm of moderate severity, and it was found that cooing, whistling, and creaking râles were abundantly present. She inhaled during fifty seconds a few minims of nitrite of amyl. Two minutes after the inhalation had been commenced the râles had entirely disappeared and her breathing had become quite easy. In another minute the râles had returned and the breathing had become more difficult. After an interval of six minutes, when both the râles and dyspnœa were present in their original abundance and severity, she again inhaled nitrite of amyl, this time for thirty seconds, and in forty-five seconds after commencing the inhalation the râles had entirely disappeared and the breathing was perfectly unembarrassed. In five minutes afterwards, the original state of breathlessness, with its accompanying auscultatory phenomena, had returned. After an interval of ten minutes, nitrite of amyl was a third time inhaled, with essentially the same results as on the previous two occasions.

This observation showed in a very striking manner that nitrite of amyl very rapidly caused every sensation of dyspnœa to disappear. The coincident effects of the highest interest were that so long as the dyspnœa was removed, and only so long, were the cooing, whistling, and creaking sounds silenced, and so long also were there present those well-known modifications in the pulse characteristics which indicate dilatation of bloodvessels. Since this observation was made I have accumulated much evidence of a similar kind. In a few other cases nitrite of ethyl as well as nitrite of amyl were given by inhalation, but in the greatest number of the observations the administration was effected by the introduction of the nitrite into the stomach, and thus a much more prolonged action was obtained. In this manner, not only has the influence of nitrite of amyl and of ethyl been examined, but also that of nitrite of sodium and of the nitrite-acting substance, nitro-glycerine. Further, in several cases of severe asthmatic orthopnœa occurring during the night, remarkable alleviation, with coincident silencing of the râles previously abundant in the chest, were obtained in several observations made for me by Dr. Vaughan and Mr. Toft on patients in the wards.

In bronchitis accompanied with dyspnœa similar effects were also obtained. The dyspnœa was removed, and at the same time the previously existing dry râles disappeared. Let me illustrate this action of nitrites in two patients suffering from bronchitis, now placed before you. One of the patients has been in the wards for several weeks, and from previous experience I can confidently predict the changes that will occur. He has suffered at intervals during the last fifteen years from bronchitis, the lungs are emphysematous, and his chief complaints at present are breathlessness and cough with a rather adhesive and slightly frothy sputum of small quantity. The other patient was admitted into the hospital only yesterday, but I shall be much disappointed if the observation I shall immediately invite you to make on her should fail as an illustration. Her cough originated four months ago from a severe wetting. You observe that she has very obvious dyspnœa, and the sputum which I show you is large in amount, watery, and contains much froth. Both patients are suffering at the present moment from dyspnœa, and, as you have heard from the four members of the class who are examining the patients, two of whom are continuously auscultating the chest of each patient, there are now associated with the dyspnœa an abundance of snoring, whistling, and cooing râles. I now ask Dr. Jeffcoat, the resident physician, to give to one patient four minims of nitrite of amyl in a little water, and to the other two minims of a 1 per cent. solution of nitro-glycerine also mixed with a little water; and the gentlemen who are auscultating will at once inform us of any change in the sounds which they hear, while I have asked the patients to announce the first change which they experience in their sensations. It is only a very few minutes since the medicines have been given, and already you have heard, almost simultaneously, that silence prevails in the chests where before there was a continuous succession of sounds, and that both patients find that they no longer experience any dyspnœa.

The significance of the facts I have now brought before you in connexion with the influence of nitrites upon the dyspnœa of asthma and bronchitis, some of which you have yourselves assisted in observing, is almost self-apparent. They appear to throw light upon the production of the dyspnœa of asthma, and in doing so to confirm the conclusion otherwise arrived at by Biermer that the dyspnœa cannot find its chief explanation in spasm of the diaphragm. They appear also to show that this dyspnœa does not depend on suddenly produced and vanishing constrictions of the bronchial tubes, caused by swellings of a hyperæmic, herpetic, or urticaria-like character; for the means that have been successfully employed to control and terminate the dyspnœa are the very means which should, according to the theory which involves constrictions of this kind, be the most efficient for increasing and prolonging it. Relief of the dyspnœa and removal of the accompanying râles were simultaneously or nearly simultaneously produced by nitrites, whose action is to increase hyperæmia by dilating bloodvessels. As nitrites, however, lessen the contraction of non-striped muscle, it appears to follow that the râles which accompany the dyspnœa of asthma are produced by spasmodic contractions of the bronchial muscles, that the dyspnœa is mainly the result of spasmodic constrictions of the bronchial tubes, and that therefore the old doctrine which attributes the asthmatic paroxysm to spasm of the bronchi is in all probability the correct doctrine. In reference to their bearing upon the dyspnœa of bronchitis we have these facts to assist us: that whenever rhonchi and sibilations accompanying dyspnœa were removed by nitrites, the dyspnœa was also removed or lessened; but when the rhonchi or sibilations were unaffected the dyspnœa was not appreciably lessened. It could not be expected that in all cases of bronchitis the administration of nitrites would be followed by complete relief of the dyspnœa and complete removal of the auscultatory phenomena. In this disease dyspnœa is sometimes produced by mucus or other inflammatory products accumulated in the bronchial tubes, and rhonchi are sometimes heard which are caused by a viscous condition of these accumulated products, and even by accumulations of a similar kind in the

throat. In such cases nitrites fail to give complete relief, and they fail to silence the abnormal sounds. That they should fail is a confirmation rather than a refutation of the opinion which I wish emphatically to state—that stenosis of the bronchi due to spasmodic contraction of the bronchial muscles is a frequent cause of the dyspnœa of ordinary bronchitis.

I have not obtained any facts that would justify the preference of any one of the nitrites because it possesses therapeutic advantages over the others in the treatment of asthma or bronchitis. There are, however, conveniences of administration which lead me to give a preference to nitrite of sodium and to nitro-glycerine. They are both extremely stable, and they can readily be given in solution, either by the stomach or by subcutaneous injection. These advantages are not possessed by nitrite of amyl and nitrite of ethyl, and even the latter substance in the alcoholic solution of the *spiritus ætheris nitrosi* of the Pharmacopœia is notoriously a very uncertain preparation. It is probable that the favour with which this preparation is, notwithstanding, regarded, is due not only to the action on the circulation which it shares with the other nitrites, but also to its previously unrecognised influence on dyspnœa, which is no doubt exerted when it is administered, as it so frequently is, in the treatment of bronchial catarrh. When the volatile nitrites are given by inhalation the effects are only of brief duration, but when they are given by the stomach the effects are similar in their relatively prolonged duration to those of the non-volatile nitrites. Nitrite of amyl, nitrite of ethyl, nitrite of sodium, and nitro-glycerine have each proved successful in my observations in relieving the dyspnœa of asthma and bronchitis. I believe they do so, gentlemen, by removing bronchial spasm, and the remarkable power which they possess in doing this will probably lead to their being more largely used than they hitherto have been in the treatment of disease. Where their administration is successful in removing the auscultatory evidences of such spasm, it is difficult to imagine anything more convincing of the beneficial influence that can be exerted upon the conditions of disease by pharmacological agents. The observer has presented to him a patient in whose thorax a continuous succession of varying sounds is heard. Within a few minutes after a nitrite has been administered, the endless succession of noisy breath accompaniments gives place to an almost complete silence, in which only the subdued quiet of normal respiration is heard, and at the same time, what to us is of even greater interest and importance, the distress of dyspnœa, or, it may be, the intense suffering and anxiety of orthopnœa, is entirely removed.

Lectures
ON
INJURIES OF NERVES.

Delivered at the Royal College of Surgeons,

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LECTURE III.—*(Continued.)*

TREATMENT OF NERVE INJURIES.

FOR the proper and rational treatment of nerve injuries the first essential is an accurate knowledge of their pathology. It is to the want of this knowledge that the erroneous theories of nerve union and of the treatment requisite for nerve lesions are to be attributed. To the opinions held on this subject I shall now briefly refer, for they seem to me to be instructive.

The conclusions of Galen "that nature was powerless to regenerate nerves" held unlimited sway until the time of Cruikshank and Haighton; and the experiments of these observers, published in the Philosophical Society's Transactions for 1795, completely subverted the doctrines taught up to that date. These surgeons experimented on dogs by dividing the pneumogastric nerve on the one side only, and having kept the animals alive for a varying number of days, they demonstrated that division of the opposite nerve trunk was not sufficient to cause death, previous experiment having shown that a simultaneous section of both vagi was inevitably fatal. They therefore concluded that the one nerve must have been reunited before the second operation was performed. Swan, Fontana, Descot, and Prévost arrived at the same conclusions, and the result was a very general belief that nerves when divided were *inevitably regenerated*—a belief which led to a corresponding carelessness in the treatment of such injuries, and which has been widely prevalent up till the most recent times, not only in England, but also in France and Germany, where Flourens and Steinrueck upheld the theories started in this country. The investigations of Waller, Vulpian, and Philippeaux about the year 1852, brought a new light to bear on this subject, and formed the first step in the accurate pathology of nerve lesions. It was shown by these physiologists that the peripheral end of a divided nerve underwent degeneration, and that some months intervened before the nervous substance was repaired.

Theoretically, then, a corresponding time should always intervene before the nervous functions were re-established, and thus, though the theory of inevitable nerve regeneration was not relinquished, it was assumed that union never could take place by first intention. But the eyes of surgeons could no longer be shut to the cases which constantly came under their notice, and as experimental inquiry yielded to clinical observation, the fact was speedily established that in a large number of patients suffering from nerve lesions no union of any kind occurred. In this branch of pathology, however, as in many others, the discretion of pathologists speedily outran their wisdom, and the theory of "supplementary sensibility" and "supplementary motility" was, especially by French surgeons and physiologists, adopted to the exclusion of nerve regeneration, and more especially to that of reunion by first intention. In a former lecture I have discussed the probabilities and proofs in favour of union by this latter method, and also the evidence bearing upon the presence and amount of nerve anastomoses and supplementary sensation; I shall therefore take for granted that the possibility of immediate union is an established fact, and shall now pass on to consider the best means at our disposal for procuring the same.

Suture of nerves.—In order that any tissues which may have been divided by the surgeon or else by accident should unite as speedily as possible, it is plainly of the first importance that they shall be closely approximated. How should this approximation be maintained in the case of divided nerves? To this question there can be, in my opinion, but one answer—"By suture"; and the reason that this answer has not been given very many years ago is to be found in the erroneous views as to the probable results—e.g., tetanus, &c.—of the irritation which the stitches might set up, as well as in the mistaken ideas of nerve repair just alluded to. Putting aside the more than doubtful assertion that nerve suture was performed in the middle ages by Lanfranc, Guy de Chauliac, &c., the operation is said to have been performed by Arnemann in 1826 and by Flourens in 1828. At a later date it was practised in several instances by Dupuytren at the Hôtel Dieu. But although these cases are interesting from a historical point of view, the time when nerve suture came to be practised in surgery on a definite physiological basis is much more recent, and may be said to date from 1864, when Laugier, a French surgeon, sutured the ends of a recently divided median nerve. Laugier claimed that immediate union resulted, but whether this was or was not the case is not sufficiently clear. In 1865 MM. Eulenberg and Landois made numerous experiments on animals, and concluded that after suture not only does the peripheral end of the divided nerve degenerate in a manner precisely similar to that noticed when no sutures are used, but that the sutures themselves are absolutely harmful, producing neuritis and perineuritis, and may even give rise to suppuration and secondary abscesses in the lungs. These statements, combined with the ever-present dread of tetanus, naturally dissuaded surgeons from universally adopting such measures, and in 1868 Boeckel of Strasburg related a case in which, after division of the median at the wrist, there was a recurrence of sensation in two months, except in the index finger; no sutures had been used, and the author rather illogically concluded that they were never necessary. Some years later Le Dentu noted that bullæ occurred on the fingers after an attempt

had been made to procure immediate union by suture of a recently divided median; this lesion he attributed to the irritation caused by the sutures, and not to the cutting off of the nervous influence. There can be but little doubt that this conclusion was an erroneous one, for as I have already endeavoured to prove, these trophic lesions are not of an irritative nature, and the bullæ were no doubt due to a failure of union by first intention, and not to the presence of the catgut. But the results obtained by Eulenberg and Landois are entirely different to those of other experimenters, some of whom in vain attempted to induce neuritis by means of setons and other irritants, and, what is of much more importance, amongst a large number of cases in which sutures were applied to human nerves these much-dreaded consequences were conspicuous by their absence. The result of further experience has thus come to be that, as far as any danger is concerned, no surgeon would hesitate to use the most obvious means of approximating the ends of a divided nerve, and would fearlessly insert as many stitches as might be necessary without any dread. But, putting the danger out of the question, is the patient any more likely to have the continuity of his nerve restored if the ends are sutured than if they are left to nature? To this I would answer most unhesitatingly in the affirmative, for, judging by accounts published by various authors and by my own observations, I can have no doubt but that in the vast majority of untreated nerve wounds either no union at all or but a most imperfect one can be expected. That the ends are sometimes united even if left to themselves is proved by some of the cases already narrated, but under these circumstances a primary union can but rarely occur, for the ends are but seldom in apposition, a state which is absolutely necessary for this method of healing. And again, in cases where primary union fails, by the time when degeneration and regeneration have occurred in the distal fragment, it very frequently happens that in the process of cicatrisation the nerve ends have either become adherent to the surrounding muscles and tendons, or else are widely separated by fibrous tissue, which forms an impenetrable obstacle to further attempts at reunion. These latter conditions, at any rate, can be obviated by the employment of sutures, and, even if union by first intention fails, the nerve is left in a much more favourable condition for subsequent regeneration than is otherwise the case. Now, the experiments by Glück proved very clearly that in fowls, rabbits, &c., the use of sutures was followed by a primary union of the divided nerve, and on these grounds an analogous result in man might fairly be expected. The records, however, of cases in which such treatment has been adopted supplies information of a much more valuable nature, and it is to the evidence afforded by such cases that I would rather direct attention.

Primary nerve sutures.—The operations which may be undertaken for the suture of divided nerves are conveniently divided into two classes: 1st, primary; 2nd, secondary. The operation of "primary suture" consists in stitching together the ends of a divided nerve either immediately after injury, or else very shortly afterwards—before, in fact, the process of healing of the wound has commenced. This operation should, in my opinion, be performed in every case of nerve injury in which it is possible. There are, of course, cases in which such an extent of nerve has been removed that it becomes a physical impossibility to bring the severed ends into apposition, and in such alone should the operation be omitted. I have no doubt that the operation of nerve suture is absolutely harmless, and that when the nerve ends are left unsutured union is most unlikely to occur at all, and at best is very imperfect. Lastly, that when the nerve ends are carefully sutured and maintained in apposition, a restoration of function is the most frequent result. Under this belief, I cannot agree with those surgeons who consider that in cases of clean-cut wounds sutures should not be inserted. I believe these are just the cases best suited for suture. M. Nicaise, in his article on Injuries of Nerves in the "International Encyclopædia of Surgery" says: "When the section is clean cut and simple, without extensive wound of the integument, then suture should not be resorted to unless the separation is considerable," and other surgeons, especially on the Continent, express the same opinion. I am perfectly convinced that such advice should not be followed. No possible harm can result from suture, and the prognosis of the case of a wounded nerve left to itself is most unsatisfactory.

The mode of application of the suture is a matter which has received much more attention than it really deserves. For a long time it was taught that the sutures should only be passed through the nerve sheath, and that it was dangerous to pass the needle through the bundles of nerve tubes themselves. This, again, was all due to theory, and gradually surgeons have learnt that the thought of danger is one with which they need not trouble themselves when considering the best method of fixing the separated nerve ends in apposition. I have myself passed sutures completely through human nerves, and have frequently seen them passed by others without the slightest evil result, and in the now numerous cases recorded in surgical literature the same treatment has been followed without a single recorded instance of any complication. The method which I would recommend is the following: A small needle armed with the suture should be passed completely through the nerve trunk at right angles to its long axis, about a quarter of an inch from the cut surface in each end, and in large trunks another suture may be passed at right angles to the first. These sutures should then be drawn tight until the opposing cut surfaces are brought into contact, and finally the edges of the sheath should be neatly stitched by three or four more sutures passed through it, so as to include within it all the cut tubules.

The material for suture.—The choice of a material for suture is naturally influenced by the same considerations as those which obtain in the similar operation of ligature of vessels, and just as in the latter it is advisable to use a tissue which will not act as an irritant and will be absorbed, so is a similar material indicated in the suture of nerves. In the majority of recorded cases catgut has been used, and I am inclined to consider that for small nerves carbolised catgut is the best material. In those cases, however, in which there is any unusual tension, or in which it is anticipated that, on account of any complication, it may be necessary to disturb the wound, I think that carbolised gut does not possess the proper amount of resisting power, and does not last a sufficient length of time. In such cases I should use by preference a more stable ligature, such as chromicised catgut, kangaroo tendon split into sufficiently small filaments, horsehair, or fine silk; I prefer the two former to the latter. After apposition has been obtained by suture, the limb should be fixed on a splint in such a position as to keep the injured nerve in a state of the least possible tension. The wound should be thoroughly cleansed, all sutures used should be first rendered aseptic, and every endeavour should be made to ensure healing by first intention.

The value of primary suture of nerves.—Clinical facts must furnish the basis on which an opinion may be formed as to the value of primary nerve suture. It is useless to argue from any other than a clinical standpoint. The investigations of experimenters on animals of various kinds possess a value of their own, but the conclusions arrived at in this way cannot possibly be directly applied to man. When we consider that after the section of the spinal cord of a pigeon there may be a complete restoration of continuity, when we are told that in a monkey three or four inches of nerve may be remade in as many months, the absurdity of applying to man the conclusions arrived at by experiment is very obvious. The cases of primary suture which have been observed by myself at St. Bartholomew's Hospital may be summarised as follows:—The median nerve was sutured on eight occasions, each time with success. The ulnar nerve was sutured eight times, of these, two cases were completely successful, two were partially successful, and three were failures. In one case primary suture failed, and a secondary suture seven months later was followed by complete success. The median and ulnar nerves were sutured at the same time in one patient, with success. The total number of cases observed by myself thus stands at seventeen. Of these, twelve were successful, two were partially successful, and three were failures. In two of these cases union by first intention without previous degeneration ensued. In each case the median nerve had been divided. In other cases some fibres appeared to unite by first intention, although the bulk of the nerve did not do so.

Cases already recorded.—I have found much difficulty in summarising the cases reported in medical literature, for in many the reports are too meagre, in others they are evidently inaccurate, and in some they are imperfect in important particulars. I have thus been compelled to classify a certain number as "doubtful successes," for although they are

claimed as successful by their authors, it is not possible to accept them without doubt in the absence of important details. It is, of course, probable that in the majority of these patients there was perfect recovery; but I have thought it more satisfactory to include in the "successful" class only those about which there could be no doubt at all. The following list, I believe, includes practically all the cases recorded as late as the end of the year 1885:—

Of primary suture of the median nerve, six cases were "successful," six were "doubtful successes," five were partially successful, two were failures, and in one case the result was not stated—total, twenty. Of primary suture of the ulnar nerve, four cases were successful, four were doubtful successes, three were partially successful, and four were failures—total fifteen. Of primary suture of the musculo-spiral nerve, four cases were successful. Of primary suture of the radial nerve, one case was successful. Of primary suture of the median and ulnar nerves simultaneously, two cases were successful, two were "doubtfully successful," four were partially successful, and three were failures—total eleven. Of primary suture of the sciatic nerve, one case was partially successful. Of primary suture of the peroneal nerve, one case was a failure. Of primary suture of the post-tibial nerve, one case was partially successful. Total number of cases of primary nerve suture recorded up to December, 1885, fifty-four—viz., successful, seventeen; doubtfully successful, twelve; partially successful, fourteen; failures, ten; result not stated, one. These added to my own seventeen gives a grand total of seventy-one—viz., successful, twenty-nine; doubtfully successful, twelve; partially successful, sixteen; failures, thirteen; result not stated in one.

Now, at first sight it might seem as though such a summary as the above would give a very fair insight into the prognosis of cases of primary nerve suture. Yet I venture to say that in some respects it is unavoidably misleading. I well remember that when, some few years ago, I first interested myself in the question of nerve suture, I was inclined to form a somewhat low estimate of its value. I saw cases operated upon, and I saw them frequently leave the hospital without any material sign of nerve union, and with deformities resulting from trophic lesions, from contracted and atrophied muscles, or from ankylosed and painful joints. I was told that most of the cases operated upon were failures, and such indeed was my first impression. Further investigations, however, soon placed matters in a different light. I found that in almost all of the hitherto recorded cases nothing was noted of the state of the paralysed parts after a few weeks or months at the latest, and I therefore determined to keep my patients in sight, not for months, but for years. And whilst thus engaged in watching those who had been more recently operated upon, I also sought out other patients who had met with nerve injuries in past years. On examining many of the latter, I found that, as might be expected, most of those whose nerves had not been sutured at the time of injury were but little improved, Others had gradually recovered. In some of the latter the nerve ends had been sutured; in some this had not been done. But what most interested me was to find that in many patients who had subsequently completely recovered there had been a long interval of many months, or even of years, between the time of injury and the return of sensation or motion, and I saw at once that no case should be written down as a failure simply because the operation of suture was not followed by immediate success. It was with this impression that I continued to watch the various cases that I met with, and I believe that there is no other class of surgical injuries which so well repay clinical observation. So little has been written of them that they are constantly supplying surprises. Each case has its own peculiarities, each runs its own course, yet there are certain general rules which apply to all, and enable the surgeon to speak with tolerable confidence as to the final results of cases of nerve injury which have been treated by primary suture. If there is one fact more than another which stands out in the clinical histories of the patients who have been under my own observation, it is that after the failure of union by first intention, after trophic changes of many kinds, after complete atrophy and degeneration of the paralysed muscles, recovery may yet be complete.

Time is the great requisite in these cases. The surgeon and the patient must alike have patience, and if the nerve ends have been placed and maintained in accurate apposition, it is to time that the final result must be left. Putting aside for the present the cases in which primary union occurs, I would refer to the period that elapsed in the various patients treated at St. Bartholomew's Hospital between the time of suture and of repair.

Of the six cases of successful suture of the median nerve, five months elapsed in the first case before any signs of union were apparent; in the second case restoration of function occurred within a few months; in the third case it occupied more than a year; in the fourth case about a year; in the fifth case about six months; in the sixth case there was no improvement for more than a year, and final restoration of function was not complete for one year more.

Of the two cases of successful union of the ulnar nerve, in the first at the end of a year the hand was clawed, the muscles atrophied, and the skin anæsthetic; it was not until three years later that restoration of function was complete and perfect. In the second case it was thought, after several weeks' waiting, that the ends of the sutured nerve had become separated, and they were exposed only to show an apparent union. The patient was discharged as a case of "failure," yet subsequently, many months later, function was restored.

In the case of successful suture of the median and ulnar nerves, the muscles wasted, the hand was paralysed, cold, and blue, and the skin was anæsthetic six months after the operation. In another year the hand was practically restored to its natural condition.

The facts are plain. When a nerve has failed to unite by first intention its lower end degenerates, and, again, regenerates in the way I have already described. That such regeneration is hastened by contact with the proximal end I have no doubt, but in the cases in which the muscles have atrophied and degenerated, it is evident that some time must elapse before they can be re-made. Motor functions, as a rule, take longer to return than do sensory ones.

Now, if it be conceded that years may elapse before return of function, it is evident that where the suture has only been performed a few weeks or months, hasty conclusions as to the final result should not be drawn. Keeping this in mind, let us turn to the other cases that I have detailed and placed under the heads of "partial success" and "failure." Of two cases of "partial success" after suture of the ulnar, one has only been performed three months, the other six. In each there was, when I last saw the patients, a considerable return of function, and I feel sure that each will further improve. Of the three cases of "failure," in one the wound sloughed considerably. In the other two, after lengthened intervals no union occurred. To these I shall again refer in discussing the "causes of failure," and would now turn to the cases of primary suture described by other authors, and already tabulated.

Without stopping to consider the cases recorded as "successes," let us briefly glance at the length of time the others—those of "doubtful success," of "partial success," and of "failure"—were kept under notice. Of the cases of median suture six, in which success was doubtful, were under notice respectively for two months, twenty-five days, two months, one month, a few days, and a few weeks. In five cases of "partial success" the times were eight months, a few weeks, several months, no time stated, and one month. In the two cases of failure no time is mentioned; the patients do not seem to have been under observation more than a few weeks at the outside. Looking at the cases of suture of the ulnar nerve, we find that of four cases of "doubtful success" the patients were seen for periods of six weeks, eighteen days, no time specified, and five weeks. Of three cases in which there was partial success, for two years, "some months," and one month. Of four cases of "failure" the patients were observed for three weeks, three weeks, one year and a half, and three weeks. Of cases of suture of the median and ulnar nerves, in two, in which success appears doubtful, the patients were under observation for "some weeks" and a year and a half respectively. Of four cases of "partial success," for ten weeks, three weeks, fourteen days, and three months. Of three cases of "failure," the patients were seen after six weeks, two days, and eight days respectively. In the case of the sciatic nerve the only patient was under notice for thirteen days, and there was then some improvement. The only patient on whom a primary suture of the peroneal was performed died sixty-five days later with gangrene of the thigh; the nerve ends were found separated. In a case of primary suture of the posterior tibial nerve, there was a partial restoration of function in four weeks.

A consideration of these facts leads to the inevitable conclusion that the reports of these cases cannot be considered final. In the enormous majority of cases of failure or of partial success the time that had elapsed since operation was far too scanty to allow of reunion, supposing that union by first intention had failed. I am convinced that it would be a most grave error of judgment to conclude, because no restoration of function had occurred even as late as a year or more, that such was not possible. The cases observed by myself supply abundant proof of the correctness of this assertion.

Prognosis of primary nerve suture.—In considering the prognosis of cases of primary nerve suture, there are two chief questions to answer. First, what is the probability of restoration of function? Secondly, how long will it take for function to be restored?

With regard to the first question my own mind is clear. *The probability is that function will be restored.* I am quite convinced that if the nerve ends have been carefully coapted and kept in position, restoration of function will ensue in the great majority of cases. The instances I have given are my authority for this statement, for I have shown that in by far the greater number of failures, or of partial successes, the time which had elapsed when the cases were published was too short to permit of accurate conclusions being drawn. But, whilst I would thus give a good prognosis, I would at the same time warn the patient that some trifling inconveniences may remain permanently. Thus, in cases otherwise successful, I have noticed complaints of slight stiffness of the muscles or joints, of pain or aching when the weather changed, or when the parts were cold or wet. Other patients have complained that, though they had good tactile sense, nevertheless the parts felt, in a way that they could not explain, different from what they did before the accident, and it was evident that much of the delicacy of the sense of touch was permanently impaired.

The earliest signs of returning function are usually met with in relation to the sense of touch. The first thing the patient notices is that he can feel in a part previously anæsthetic. Just at first he does not localise properly—perhaps refers sensations from one finger to the other, or from a finger to the palm of the hand. And indeed this is only what might be expected if we consider that the several divided nerve fibres can seldom be united as before the injury, that the proximal end of a fibre which was distributed to the middle finger may become united to the peripheral end of one distributed to the thumb, and so forth. The patient has, in fact, again to educate his sense of touch in the way that all infants have to do. What has generally surprised me is the rapidity with which this education is completed, rather than the difficulties which at first present themselves. The return of the sense of touch, followed by that of pain and of temperature, affords further ground for promising return of muscular power. Will the atrophied and shrunken muscles regenerate (I am supposing some time has elapsed without improvement)? They will. Their power will return; their bulk will increase. Trophic lesions also will disappear, and the tissues will practically return to their normal state. Do any general conditions influence the prognosis? I think they do. I am of the opinion that prognosis is better in the young than in the old; best of all in children and young adults. I think I have observed that regeneration is more rapid in warm summer weather than in the winter time, when paralysed parts are liable to become cold and livid, with impeded circulation and lowered vitality.

The consideration of these points leads directly to the second question in the prognosis: How long will it take for function to be restored? This is not a question that can be answered directly. The first point for consideration is, What is the probability of union by first intention? For an answer to this I would turn to the cases already tabulated. In only two instances out of the seventeen under my own observation has union by first intention resulted. In each the divided nerve was the median. In three cases of suture of the ulnar nerve recorded by other authors, —namely, Boeghold, Bramwell, and Clark,—supposing the accounts to be accurate, there was union by first intention. In one case by Kraussold of suture of the radial, median, and ulnar there was a similar result. Thus, out of a total of seventy-one, there are but six cases of union by first intention, and of some of these I am bound to confess I have some doubt, for there are absolutely no details supplied of those by Bramwell and Clark, and but few by Kraussold. I should therefore conclude that union *by first intention* is not to be *expected* in any given case. And, supposing that such union does not occur, what time must elapse before recovery? This is a question quite impossible to answer. It may be weeks, months, or years; no one can tell. Recovery may be preceded by trophic changes, joint disease, and paralysis, or none of these may be present. But with regard to time I could not say more than that considerable improvement will probably occur within a year, and of this I would feel more certain in a young than in an old person, and where the wound has healed readily without much suppuration. I would give up no case as hopeless until the lapse of at least two or three years, and not then if any improvement was in progress.

Does the prognosis differ in the case of different nerves? This is a question I have often asked myself. I think it does. All the cases of suture of the musculo-spiral have been successful, and, although it is looking ahead a little, I would remark that a similar success has attended almost all the operations of secondary suture in the case of this nerve. I should therefore be the more inclined to give a favourable prognosis. Concerning the median nerve, I find that all eight cases seen by myself have been successful; while of twenty recorded by other authors only two are recorded as failures, and these may be explained by the short length of time they were kept under observation. With regard to the ulnar nerve, my impression is that motion never returns before sensation, and that of all paralysed muscles the interossei are the ones which are most slow to recover. I have not seen a sufficient number of injuries of other nerves to form any opinion as to their relative capabilities of repair, and, indeed, what I have just said in respect of the nerves of the upper extremity rather embodies my own somewhat vague impressions than forms any definite conclusions.

ON RELIEVING TYMPANITES BY PUNCTURE OF THE ABDOMEN.

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THE inconvenience of even moderate flatulent distension of the stomach and bowels, of which most people have personal experience, is so great that it may be easily understood, upon reflection, how highly distressing and painful, and indeed how fatal, excessive and unrelieved distension of the same viscera may prove (whatever the cause). For what is the point, the signification, of unwonted and protracted gastro-intestinal inflation? It means, of course, interference with the contraction, and, therefore the descent, of the diaphragm, the "great inspiratory muscle"[1]—i.e., interference with the movements of the lungs, and with the action of the heart which rest upon the diaphragm; and, no doubt, serious damage, by pressure on the various nerves, eminently the sympathetic system, and upon the bloodvessels as well in the abdominal[2] as the thoracic cavity.[3] The likelihood of unwonted pressure on the sympathetic system by over-distended stomach and bowels, and the consequent evils, will be apparent when one considers the relation of those viscera to the grand solar plexus and the various ganglia which exercise such important influence upon the circulation and upon the numerous secreting organs whose action, reflexly, on the heart is so conspicuous. This excessive gastro-intestinal distension has the significance of that paralysis, more or less complete, of the diaphragm which arises from lesion of the phrenic nerves, division of which,

[1] That chief or special agent by which the cage of the thorax is vertically increased, and by which also the transverse diameter of the lower part of the chest is found to be enlarged. The diaphragm was designated by the great Haller as a muscle "post cor, facile princeps."

[2] The movements of the diaphragm having great physiological influence on the functions of the abdominal organs.

[3] Interference with the contraction of the diaphragm is, probably, more disastrous in the man than in the woman, as in the former the thorax is ascertained to be dilated mainly by the descent of the diaphragm, whilst in the latter it is brought about considerably by raising of the sternum and the ribs. This difference has been attributed to the greater flexibility of the ribs of the woman, permitting their greater movement by the muscles.

as we know, ere long produces death.[4] And, of course, interference with the inspiratory descending movement of the diaphragm, limiting the due and proper expansion of the chest cavity, quickly limits the exchange of the respiratory gases in the blood.

In a communication to the Transactions of the Provincial Medical and Surgical Association (vol. xii., 1844), my friend, Dr. Sibson, with whom, later on, I often worked, described the "changes in the situation and structure of internal organs" under various circumstances. After noticing the "terrible anxiety," "dyspnœa, and interruption of circulation" existing in cases wherein the circulating and breathing apparatus are thrust up by the diaphragm in many diseases of the abdomen, he remarks that the deadly symptoms are not due so much to the disease within the abdomen as to the clogging of the heart and lungs. One of the most graphic descriptions of the symptoms produced by extreme tympanites is given by a French writer (Mothe), to whom I shall allude later on. After enumerating the distressing eructations, the loud noises of the flatulence, and the pain following their cessation, the vomiting, the heat, the quick and strong pulse, this writer describes the laboured respiration, the impossibility of taking food, and the constipation, and he proceeds: "Successivement viennent les anxiétés, l'accablement, les défaillances, les extrémités froides," &c. Well may the symptoms connected with obstruction or occlusion of the bowels warrant the designation of "miserere mei," which it has obtained. Ambrose Paré declares that rupture of the bowel may be the result of over-distension by flatulence, and Dr. Church tells me he has seen the same resulting phenomena, most likely from there being ulceration of the inner surface. He observes: "There are few points in the practice of medicine of more importance than this—to remove or prevent flatulent distension of the abdomen." In 1848[5] Dr. Sibson pointed out that a highly distended stomach also pushes up the liver, which is so compressed between the stomach and diaphragm that "an additional amount of blood from the hepatic vena cava is directly thrown into the right cavities of the heart at the very time that the heart's action is embarrassed by the upward pressure of the stomach." The extent to which the diaphragm may be pushed upwards by abdominal distention is well illustrated by a diagram, which shows the upper convex boundary of the muscle to be behind the third intercostal space on the right side, and behind the fourth one on the left side. Dr. Sibson observes that when gastro-intestinal distension accompanies acute disease, such as peritonitis, it is often the immediate cause of death.[6] In 1873 that physician gave a clinical lecture at St. Mary's Hospital[7] on the "Influence of Distension of the Abdomen on the Functions of the Heart and Lungs."

Quite recently attention has been drawn, in THE LANCET,[8] to the subject of relief of such flatulent distension as I have mentioned, in puerperal cases, by means of puncturing the abdomen; but this method of procedure has been adopted in many instances of tympanites in connexion with other forms of disease than child-bed fever, with which both the physician and the surgeon have to do, and it is to their performances in such cases that I venture at this time to draw especial attention. The subject was mooted in the year 1871 in several communications to the *British Medical Journal*, soon after which I saw at least two cases in which death was apparently the direct result of unrelieved excessive tympanites (no other serious affection being discovered after death; instances, in fact, of "mors sine morbo"), which determined me not to lose any opportunity of suggesting relief in such cases, after all other means had been tried, by the simple and readily performed operation of puncturing the abdomen.[9] Somewhat later such an occasion presented itself in the case of a lady suffering from a tumour (eventually removed successfully) which, by pressure on the bowel, apparently, had produced such an amount of tympanites that the descent of the diaphragm was so incapacitated that life was seriously threatened. In the middle of the night intense dyspnœa, failure of circulation, and extreme prostration came on, when it seemed impossible "decantare loca dolentia," and nothing remained to be done but to give alleviation, if it might be, by puncturing the abdomen. Accordingly, Sir J. Paget was called in, who assented to the suggestion, and, by means of a fine trocar, punctured the prominent transverse colon in two or three places. This gave prompt and decided relief.[10] A large measure of very fetid gas was rapidly evacuated, continuing to rush out with a loud hissing noise for the space of some seconds.[11] The swelling of the abdomen at once subsided to a very considerable extent, thus averting at once collapse and destruction; in the ease procured to the patient, reminding me forcibly of the absolute and almost instantaneous repose, and not infrequently sound sleep, which follow the operation of tracheotomy in cases of croup or diphtheria. This personal experience aroused in my mind so great an interest in this operative procedure, that I resolved to make some excursions into our medical literature, and to ascertain what had been recommended or achieved in connexion with the matter—one, it must be allowed, of great practical importance.

I here propose to offer some fruits of my inquiries, and to set forth a "catena" of the main illustrations of the subject which I have encountered.

As no investigation into the history of any point of medical interest would be complete without reference to Sprengel's "Histoire de la Médecine," I find it there stated[12] that in 1617 P. Pigra, and, somewhat later, Ambrose Paré, recommended, in cases of strangulated herniæ, the process of pricking the intestine with a needle for the purpose of assisting the reduction. Later on, Corneille, Soolingen, P. Dionis, and Heister, at the beginning of the eighteenth century, did the same. It is possible, as Dr. Saunders (to whom I shall allude later on) suggests, that puncture for relief of tympanites may have been suggested originally by the necessity which the older surgeons felt themselves under, of puncturing strangulated bowels, which they did with round or triangular needles.

Commencing now with some of the older medical writers

[4] In Todd and Bowman's Cyclopædia of Anatomy and Physiology it is stated (vol. ii., p. 5) that "if the phrenic nerves be divided in a living animal, great difficulty of breathing follows, the entire labour of respiration being thrown on the muscles which elevate the ribs. If the spinal marrow be divided above the giving off of the phrenic nerve, respiration ceases at once, but not so if divided immediately below that point; and in a case of fatal dyspnœa, Beclard could find no cause but a tumour of one of the phrenic nerves. I may say, in passing, that in the St. George's Hospital Pathological Museum we have a specimen showing a phrenic nerve, split, as it were, into two by the enlargement of a bronchial gland, which had been connected with an irregular dense mass containing much calcareous and carbonaceous matter." At the lower part of the specimen the nervous elements of the nerve take their course through an enlarged and softened bronchial gland. The specimen was found in the dissecting-room.

[5] London Medical Gazette, vol. vii., 1848, p. 168.

[6] He points out how to distinguish whether the stomach alone is distended, or the colon.

[7] See British Medical Journal, Aug. 2nd, 1873.

[8] See note by Dr. Priestley in the number for April 9th, 1887; by Dr. Barnes, April 16th; by Dr. Hicks, April 23rd; and by Dr. Neufield, April 30th.

[9] And the remembrance of my duties as curator of the Pathological Museum at St. George's Hospital, when having to superintend post-mortem examinations, supplies me with many instances in which pain and death might seemingly, according to more recent experiences, have been obviated by abdominal puncture.

[10] A French writer, when describing the successful issue of the operation, speaks of the relief obtained as "soulagement miraculeux."

[11] By way of demonstrating the power with which the gas was expelled through the trocar by the contracting intestine, I might adopt the expression of several writers, as well Latin as French, who constantly speak of the current of gas as being sufficiently strong to "blow out a candle." M. Mothe, to whom I allude elsewhere, after describing a case, writes as follows: "La ponction fut faite, et à peine la trocart fut-il rétiré, que l'air sortit impétueusement, et éteignit plusieurs fois la chandelle." It would seem that this experimental method of extinguishing a candle may at times cause a little consternation, as Sir W. Jenner has told me of a case operated on by Mr. W. Adams of Regent's-park in which the air passing through the trocar caught fire on the application of a lighted candle. And I have heard from him, and from others also, that it is known that stable boys have a trick of holding a lighted candle to the anus of horses and watching the gas which escapes taking fire. Indeed, serious fires in stables have been attributed to such tricks. I have also learnt that gas escaping from man by the same exit is at times inflammable. This, of course, suggests the question as to what may be the chemical composition of the gas liberated from the bowels which permits it to burn. Magendie and Chevreul examined the gases which were found in the large intestines of two criminals to consist principally of carbonic acid and nitrogen gas, with varying small quantities of hydrogen and carburetted hydrogen, and a small quantity of sulphuretted hydrogen. Laycock, in his work on the "Nervous Diseases of Women," alludes to the case of a lady who used to pass enormous quantities of gas daily from the stomach, which was found to contain 5% per cent. of nitrogen. The latest reliable analysis, I believe, of intestinal gases is that of Ruge (quoted in physiological works), who in 1862 found the gas of the large intestine in man to be tolerably constant after different kinds of food—nitrogen preponderating after the use of flesh, hydrogen after milk, and carburetted hydrogen after vegetable diet, a slight amount only of sulphuretted hydrogen existing. We have only to suppose, under disease or after certain kinds of food, a certain definite proportion of hydrogen and carburetted hydrogen to exist, and then the admixture would be inflammable. Professor Robertson, of the Royal Veterinary College, Camden Town (referred to elsewhere), tells me that the inflammability of flatus in certain states of tympany in the horse is well known, and that he has himself seen it lighted when escaping from the anus. In the case of a horse operated on by Barrière in 1783 (alluded to elsewhere) it is specially stated that the gas rushing out from the trocar caught fire from the lighted candle.

[12] Tome ix., p. 107.

whose works I have found in our libraries, I will allude, firstly, to the observations of De la Font. In his "Dissertatio Medica de Hydrope Tympanite"[13] (Geneva, 1697), after quoting various authors on the subject, and especially controverting the opinions of Willis, that tympanites was convulsive in its nature (himself contending that it was fermentative), he alludes to its cure, if other means fail, by *puncture*. He also quotes Duretus as being in favour of the "compunctio seu punctura" in tympanites. In passing, I may say he alludes to the statement of Paulus Ægineta (a view held by many more recent writers), that by means of cupping glasses the air can be drawn through the walls of the abdomen, "per poros cutis," "et quasi incantamenti vice, ut loquitur Galenus."[14] The brilliancy of imagination which is here apparent is also shown by Galen, who thought that the ethmoid bone was pierced by holes in order to permit communication between the brain and throat, and for purging the brain from superfluities.

Boerhaave, writing in the early part of the eighteenth century upon wounds of the abdomen,[15] alludes to the necessity of puncturing the intestines with a needle to evacuate the air, and then observes: "Quod nihil nocet, quia quando intestina sunt difflata, tunc se retrotrahentia illas puncturas claudunt." And in his Aphorisms, writing of tympany as "dry dropsy," he says that it never cures, yet paracentesis has sometimes given ease.

About the middle of the same century, F. de P. Combalusier, in his "Pneumato-Pathologia, seu Tractatus de flatulentibus humani corporis affectibus," has a section entitled "Num peragenda in Abdominalis Tympanite Paracentesi," followed by another, "Cautelæ in Tympaniticorum paracentesi observandæ."

Later in the same century (1788), W. Trnka, in his "Historia Tympanitidis (Vindobornæ)," has a chapter headed "Paracenthesis," in which he presents and compares the views of many recent authors on the subject; and also one styled "Autlia Pneumatica," in which he suggests that with due caution an autlia (that is, a suction or air pump) might be applied to the anal orifice, for the purpose of drawing out the gas contained in the bowel.[16] In the former section, he refers to certain experimenters having found that in the case of those who had died with excessive tympanites (especially Ballonius),[17] upon piercing the abdomen with a very small instrument, air rushed out, and the whole abdomen suddenly collapsed, and who consequently asked, "An non viventi metu repentinæ mortis ista punctio fieri et potuit et debuit? Audendum hercle (ait) desperatis maxime rebus."

At the beginning of the present century, Callisen, a Danish author, in his "Systema Chirurgiæ," &c., in a section upon Tympanites, writes: "Exclusio aëris punctione abdominali simplici, insigna quidem levamine beare solet miseros." He then proceeds to say that the relief is not permanent, owing to the reaccumulation of air.

In 1812, M. Mothe, of Lyons, published a rather lengthy memoir on Tympanites, in a work called "Mélanges de Médecine et Chirurgie," in which, after enumerating seven varieties of tympanités (according to the classification of Sauvage's Nosology),[18] and quoting from many authors as to what was known of the disease (such as Lieutaud, Swart, Pomme, Levret, Litré[19]), and showing how they differed respecting the utility of abdominal puncture for its relief, he gives precise information as to its performance, the time and the locality most suitable for its use, and the kind of instrument to be used. He distinctly states that the over-distended bowel may recover its tone after the evacuation of the air, in the same way as the over-distended urinary bladder does, after relief has been obtained by discharge of retained urine. He concludes that in "essential" tympanites—that is, when the affection is not merely a symptom or accident of some grave disease—it would be in the highest degree inhuman and culpable, when other means have failed, to abandon the patient, and not to resort to puncture as a last resource.[20] And he quotes the practise of relieving tympanites in cattle (so often caused by eating wet "luzerne") by puncturing the abdomen, thus only preventing death.

In 1818, C. B. Zang, in a work published at Vienna, on Surgical Operations, has a chapter[21] in which he gives detailed notice of "Paracentesis Tympanites."

In 1835, Dr. Roche, writing in the "Dict. de Méd. et Chir.,"[22] though considering the operation to be a dangerous one, quotes certain cases which were attended by success. In the *Bulletin de l'Acad. Royale de Méd.*, 1843-44,[23] a case is related by M. Levret in which intestinal tympanites was cured by puncture of a part of the small intestine with a trocar of the size of a knitting-needle.

In the year 1845, Mr. Teale, sen., of Leeds, in his address before the Provincial Medical and Surgical Association, observed that paracentesis, by a fine trocar, of the intestine for tympanites had been successfully adopted by Sir H. Marsh and by M. Levret for its relief; and Dr. Littleton of Plymouth, in a communication later on, pointed out that about this time Sir P. Crampton and Mr. Cusack (of Dublin) had sanctioned the operation.[24]

In 1852 Labric published a thesis ("De la Ponction abdominale dans la Tympanite") in which he put together the various facts which he had met with in connexion with the operation, and gave his conclusions deduced from them. He recognises the two varieties of tympanites, peritoneal and intestinal, and gives their causes, symptoms, and treatment, quoting especially Chomel[25] and Piorry[26] as to the source of the gas in the former variety. He notices that the operation is often resorted to successfully by veterinary surgeons in the case of cattle on the point of death, after they have eaten large quantities of moist food, especially trefoil. He observes that in man not only does the operation, when necessarily resorted to, give relief to distressing symptoms, but that it renews to the distended and enfeebled intestine its contractile power, and enables it to discharge its contents, in the same way as in retention of urine the bladder's power of contraction is restored by drawing off the urine,[27] and as the contraction of the parturient uterus is facilitated by removal of part of its contained fluids. Labric quotes Levret and Maisonneuve as having seen a return of the peristaltic action of the bowel upon the free evacuation of flatus following puncture; and he remarks that peritonitis is almost the only accident which one has to anticipate from the intestinal puncture; and this, he observes, has caused many to look upon the operation with disfavour. This peritonitis, he says, does not seem to be owing to injury to the peritoneum by the instrument, but is the result of escape into the cavity of fæcal matter. In this he is supported by Jobert, who, in his treatise on Wounds of the Intestinal Canal, says that when sharp instruments penetrate directly the intestine without tearing it, the edges close, and the space produced by them disappears when the instrument is withdrawn; and he considers acupuncture of the bowels to be free from danger. In a case of typhoid fever in which the intestinal puncture was made to relieve tympanites, no traces of puncture in the walls of the bowels were ascertainable after death. He quotes Mérat, Paré, Law, and v. Swieten, who practised acupuncture of the bowels in

[13] In many of the old writers what we call tympanites was considered a form of "hydrops," and was often called "hydrops sicca" in opposition to "hydrops ascites."

[14] De la Font's remarks open a somewhat quaint way of evacuating the air from the distended bowels recommended by some—viz., the exhausting it by the rectum. He observes: "Sunt qui putant *fistulâ clysteris* in podicem immissa sine ullo liquore, et frequenter agitato instrumento illo impulsorio dicto magnam flatuum copiam educi, modo flatus in intestinis contineantur, vel *follis fabrilis* clausus ano adaptatur, et deinde elevatur, sic enim flatus in intestinis contenti, modo pertinax aliqua obstructio in ipsis non adsit, in follem vel fistulam clysteris prædictam impellentur, quæ omnia experiri licebit."

[15] See his Praxis Med.

[16] Dr. Laycock, in his "Treatise on the Nervous Diseases of Women," quotes Kerr as saying that Dr. Osborne and Dr. Graves had continued the practice of using the air pump for abstracting the gas.

[17] Heister Mercklinius. [18] Tome x., Cachexies.

[19] Who stated that he had seen the colon so distended as to be equal to the thigh in diameter, and the whole intestine four times its ordinary volume.

[20] He would thoroughly endorse the views of Bacon, who blames physicians for not making the *εὐθανασία* a part of their studies, as quoted by the first Heberden and by Watson. Heberden, speaking of the duties of the physician, remarks: "They should try to disarm death of its terror; and if they cannot make him quit his prey and the life must be lost, they may still prevail to have it taken away in the most merciful manner." [21] Theil iii., p. 308.

[22] Art. Tympanite. [23] Tome ix., p. 9.

[24] Brit. Med. Jour., November 4th, 1871. With regard to the practice of these eminent Irish surgeons I find it stated in a lecture by Dr. Houston on Modern Improvements, published in THE LANCET of Dec. 1884, that Sir H. Marsh was in the habit of relieving excessive distension of the abdomen from flatus, without any bad effect, by pricking with a small trocar; and that he knew a lady on whom Mr. Cusack operated several times in this way, in consultation with Sir H. Marsh and Sir P. Crampton, and each time with great relief. Of any association between these gentlemen and the operation I regret to say I can find no written record.

[25] Dict. de Méd. [26] Dict. des Sciences Méd.

[27] In a note to his memoir alluded to above, M. Mothe remarks that he knew a woman who had had retention of urine for fourteen days, during this time the urine only escaping by overflow. The bladder eventually entirely recovered its natural powers.

cases of strangulated hernia. As a means of puncturing the abdominal walls, Labric recommends the trocar in preference to acupuncture, as by means of the cannula the gas may continue to escape; and he gives important surgical directions as to the mode of conducting the operation, incision of the skin being often required before the plunging in of the trocar. Considering what grave evils may be caused by excessive distension of the abdomen, the author gives a warning *against delay* in operating. Of course, he observes, if the distension is from gas in the ileum or stomach, an œsophageal or long intestinal tube may give relief. He has never seen any case of puncture for *peritoneal* tympanites, but quotes some instances from various sources.

In 1858 a case was published in the *Moniteur des Hôpitaux*[28] in which death, which seemed to be inevitable, was averted by puncture of the bowels, which were enormously distended by flatus, after other means had failed. Three or four litres of gas escaped by the puncture, with a loud noise.

In 1860 Dr. Olivieri published in the *Gazz. Lomb.* (29) a description of twenty cases which he had met with in Bolivia, South America, of acute tympanites caused by improper food, in which he had punctured the stomach. Of these, eight recovered, the others dying, "probably from not having been submitted to treatment until too late."[29] And in 1868 Bricheteau, after alluding to the discussion on the merits of the operation by Fonssagrives and Ripoli, reported in the *Bull. Gén. de Thérap.*, vol. lxxiv., p. 327, an interesting case in which Dr. Bouley had ordered it to be done at the Necker Hospital. The punctures were made on three separate occasions, and were attended by absolute relief to the patient and followed by free alvine evacuations.

(To be continued.)

ON LATERAL CURVATURE OF THE SPINE.

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No. II.

IF in my last paper I made myself understood—if I made it clear how what at first is merely a muscular condition[1] gradually invades the ligaments, and then the as yet immature epiphyses of the spine producing deformation of the vertebra—if, I say, this was made clear, it must be evident to all careful parents and to all trusted medical advisers that a periodical inspection of growing children should be made, more especially if those children be subjected to the high-pressure system of modern school teaching. Nor must it be thought that as long as parents do not observe a shoulder to be high or thick, a hip to protrude, or the dress to hang lower on one side, therefore all is well; a spinal curve, when visible through the clothing or detectable by a dressmaker's tape measure, is already sufficiently advanced to render treatment certainly prolonged, perhaps doubtful. The earliest signs of curvature are very subtle, only noticeable to the trained eye, and even by many of the profession not much accustomed to this special examination are—I must be pardoned for saying it—little understood. It will therefore be well to give, in the shortest words I can command, a description of these earliest symptoms. Firstly, of lumbar curvature, convex—let us assume to the right. The patient is placed with the back directly opposite a good light, cross shadows and reflections being avoided; the hair must be disposed on the head; the dress removed, only a chemise and perhaps an under-vest retained, and these dropped to a level with the great trochanters; all embarrassment from tendency to slip lower, and therefore wringing of the body, must be avoided by suitable arrangement.[2] The surgeon, sitting behind her, feels that the knees are quite straight, the feet close together; then, placing his forefingers on the crest of the ilium at the side outline, notes if one be higher than the other. He will greatly aid this observation if he arrange that the horizontal line of a dado or some piece of furniture crosses, at a greater distance from his eye, the figure at this level. Having settled one way or the other this point, he may recede a little, the better to take in the whole contour of the figure from the nape downwards, and will see that it is different on each side; on the convex side (in the case postulated the right) the side outline just above the ilium is full and rounded, while on the concave side the constriction of the waist is marked by a deeper excavation; the angle between the thoracic part and the iliac part of the body is on the right very obtuse, on the left much more acute; if the arms can be brought to hang evenly and perpendicularly from the body the triangular interval between them and the trunk is larger on the left than on the right side. Taken altogether, these changes in the side outline give to the whole figure the look as though the upper part did not stand straight over the lower part of the figure, but had been shifted over to the right. If now the surgeon direct his attention no longer to the outline of the figure, but to the surface, he will see that the sharper excavation on the left side of the waist marks itself also by a deeper indentation on the dorsal surface of the bone (see Fig. 5), and that it lies higher on the figure than the corresponding depression on the left, supposing any still to remain, as very early in the case there often does. Feeling for the line of the spinous processes, the surgeon may thus early find them still quite straight, because their rotation to the concave side will have compensated for their lateral deviation; but on feeling the parts on each side of that line he will find the muscles much harder on the convex than on the concave side; not, I believe, from any more powerful contraction, but because they are more supported, pushed backward, if one will, by the transverse processes. When these changes of form are observed, there can or should be no doubt as to the existence of a curve primarily lumbar, and treatment should be at once begun; but I am very far from saying that henceforth the child's life is to be devoted to persistent recumbency, or that she is to sacrifice her health by carrying on her back a heavy thing called a "spinal support"—falsely so called, because, whatever else it may support, it cannot so act on a deviated spine. On the contrary, I recommend, more especially for quite young patients, a treatment which makes very slight demands upon their time or comfort, but which after a little steady perseverance greatly modifies the curve, which in a certain period, commensurate with the severity of the case, will cure it; and which can have no injurious effect upon the health.

The particulars of this treatment are as follows. Firstly, let me refer to my previous paper. Fig. 1 represents a case of permanent pelvic obliquity from shortness of one lower limb; the spine is necessarily curved to the left. Fig. 2, from the same patient, shows how a block of commensurate thickness placed under the short limb corrects the pelvic obliquity, and therefore also the spinal curve; this latter correction was not, of course, obtained at once, but is the fruit of the plan carried on for some weeks. The deduction is obvious—viz., in every case in which by the means above described pelvic obliquity is detectable, to heighten the lower side of the pelvis until it is on a level, or in certain cases above the level, of the other side. But we need not stop there, for if pelvic obliquity can produce, as has just been proved, a lumbar curve, therefore an already existing curve can be counteracted by making the pelvis oblique—higher, that is to say, on the convex side. In early and slight cases the spine assumes, while this artificial pelvic obliquity is maintained, a perfectly straight line, or the curve may be actually reversed.[3] Older and severer cases cannot be thus immediately straightened, but they are very considerably corrected, and that correction is week by week confirmed and increased. Thus I order the heel of the boot on the convex side to be somewhat heightened, or rather arrange that the heels of the boots or shoes be broad and flat—really under the foot-heel, not pointed and in the middle of the foot, as is the present fashion; and I direct that one thickness of leather be taken from that on the concave, and that one be added to that on the convex side. Moreover, I order a hollow wedge of wood, made of two boards screwed together at one end and separated at the other by a cross-piece.[4] This wedge may be covered with plush or worsted

[28] Medical Times and Gazette, p. 539.
[29] Sydenham Society's Year-book, 1861, p. 213.

[1] By this phrase I do not mean that the muscles are primarily in fault. The reader is referred to my former paper for the explanation of this condition.

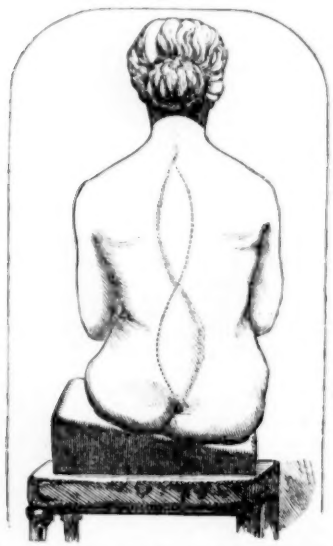
[2] An inch-wide strap of elastic webbing passed round the body and remaining garments at this level I have found to be the simplest plan.

[3] In practice it is, as a rule, undesirable to reverse the curve, as thereby the ligaments are rendered, as it appears to me, loose and flaccid.

[4] The dimensions are 14 in. long, 11 in. broad; elevation at one end from 1½ in. to 2 in., according to the case.

work. It is to be placed on the seat of a chair, and the patient sits on it with the higher side towards the convexity of the spine (Fig. 4), thus by degrees forcing the column to assume a straight line or a contrary curve. This cannot, however, be used in the first part of the case for very long at a time, but rather for several short periods during the

FIG. 4.

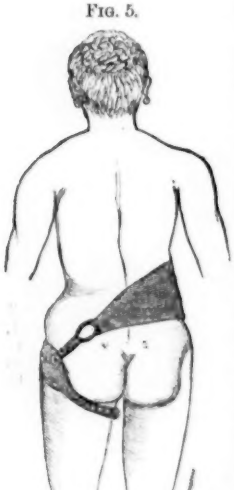


The dotted line represents the morbid curve, the shaded line that which the artificial pelvic obliquity tends to produce.

day. Hence it is convenient to let the patient sit on it during meals. For quite young subjects with commencing curves these methods often suffice.

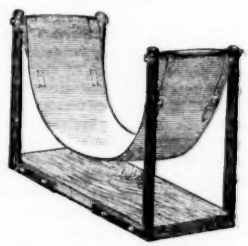
But in more developed cases some power which shall draw the convexity over to the concave side is required, and for this purpose I employ a device which I have named the *loin bandage*. It is in each instance made of coutil or moleskin, from a pattern which I myself cut to the patient's figure. The patient takes it off and puts it on by clasps (except the leg strap), its tension and balance being regulated by buckles provided with a simple mechanism that ensures to me their control. Elasticity is obtained by inserting, back and front, indiarubber rings an inch and a half in diameter, made of cord fully a quarter of an inch thick. (See Fig. 5.) This is not worn next the skin, as represented in the figure, but outside a combination garment, or, if drawers and chemise be separate, a slit in the side-seam of the latter allows the loin part to lie outside. I need only add that the hip pad should lie in the depression behind the trochanter, and in putting it on the back ring should be strained tighter than the front one. When the balance is arranged aright, the whole sits very comfortably, and does not show under the garments. A very small percentage of patients feel for a day or two the strap round the leg; they very soon lose the sensation, for there is really no tension on it, the force of the loin part acting at an acute angle with the direction of the leg strap. Rarely is any other device than those above named required, but in really severe cases two others may be added.

FIG. 5.



The *lateral swing* is a mechanism that I used for some years before giving any account of it. (Fig. 6.) Dr. Bascb and I seem to have published it simultaneously. I chiefly use it in dorsal curvature, but also occasionally in lumbar. It is fourteen inches long by six broad and ten high; it should therefore be kept at the bedside, and when the patient retires for the night she lies in this for about twenty minutes, so that the convex side of the spine is slung up off the bed by the broad webbing, and must curve in the contrary direction. Again, in the morning, quite early, the maid or nurse can hand this into the bed, and the patient can lie and take an additional sleep in it.

FIG. 6.



The *loop girth* is simply a piece of broad webbing about four feet long, fastened by each end to a staple in the wall a little above the level of the patient's waist; she stands with the concave side towards the wall; the convex side is caught in the loop, the foot on that side being supported by a block from one to two inches high. When the girth is found to be properly secure, she places her clasped hands on her head and slowly bends over; then rises again and repeats this manœuvre several times, gradually increasing the number, as also the rapidity, of the movements, as custom renders them easier. Very few, if any, lumbar curves resist these combined remedies.

In my next paper the more difficult subject of dorsal curvature will be discussed.

CANCER OF BRONCHIAL GLANDS AND LUNG.[1]

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IN bringing forward the subject of cancer of the bronchial glands and lung I am not calling attention to any new subject, but I think I may venture to assert it is a subject the importance of which cannot be exaggerated, and the difficulties in the diagnosis of which all physicians must admit. From the enormous amount of adenoid tissue within the thorax, and the well-known affinity cancer has for that structure, we should reason *a priori* that intra-thoracic cancer should be of not unfrequent occurrence, and from the marked similarity between it and phthisis, especially the so-called senile variety of phthisis, in many of its symptoms, the existence of the disease is, I am convinced, frequently overlooked. The characteristic symptoms that are said to indicate intra-thoracic cancer of either the mediastinum or glands, such as fixed pain in the chest, red-currant-jelly expectoration, and enlargement of cervical glands, are not present in a fourth of the cases, while symptoms that indicate phthisis are present in the great majority of them, and in some the presence of cancer is not even suspected until widespread infiltration of either the lung, pleura, or pericardium reveals its existence. Enlargement of one or more cervical glands when present, with symptoms of a tumour within the thorax, not aneurysmal, would be to us conclusive of the presence of cancer, but this evidence is more often wanting than not. The same remarks apply to the existence of pain, which is seldom present to any extent until symptoms of pressure on the large nervous trunks occur, and this is generally so late a symptom that all doubt as to the nature of the case is set at rest before pain becomes a prominent symptom. Red-currant-jelly expectoration is in my experience a very rare symptom. I am aware that in these assertions I am not in keeping with the generally received opinions on the subject, but unfortunately

[1] Read before the Academy of Medicine in Ireland, May 28th, 1886.

every-day experience proves to us that generally received opinions are often erroneous, and we find often when it is too late that all the statements in standard works are not invariably to be relied on; especially so is the generally accepted one that cancer of the lung or mediastinum is generally secondary to cancer in other organs, so that our conclusions are unsatisfactory even where symptoms arouse our suspicion, and we look for its presence elsewhere—generally not to find it.

Cancer of the bronchial glands and lung, in my experience, nearly always begins as primary cancer in these situations, and very rarely as secondary infiltration from other parts, and where it is secondary there is generally well-marked engagement of the lymphatic system in other situations before it becomes intra-thoracic. The intra-thoracic situations where malignant disease is met are two—namely, the bronchial glands and the lung, and anterior mediastinum. The former situation is from a clinical point of view the most important, as malignant disease in these structures, simulates phthisis in a subacute form so closely that its differential diagnosis in some cases is almost impossible. From observation of a good number of cases I am convinced this is so, and a case of malignant deposit in the bronchial glands, infiltrating the lung, ending in ulceration and in the formation of cavities, is frequently set down as one of hopeless phthisis, a post-mortem on which would be of no interest, and all record of the frequency of the disease is in consequence entirely lost. With mediastinal cancer such an error is not so likely to occur, as, like other intra-thoracic growths, such as aneurysm, the symptoms are more the result of the pressure it exercises on the important vascular and nervous structures around it, and which attract attention long before infiltration of the lung and general cachexia show themselves. Added to this, the growth is more superficial and more easy to be recognised. With the former variety lung symptoms predominate; with the latter cardiac and vascular ones. Hæmoptosis appearing early, and being constant in its occurrence, would seem to be the most reliable sign, and was present in more than half of thirty-nine cases recorded by Dr. Risdon Bennett in his Lumleian Lectures on Intra-thoracic Cancer, and Dr. Walshe speaks of it as having occurred at some period in nearly all of his cases. When persistently present it affords evidence of the situation of the growth in the bronchial glands or in the lung itself, with pressure on the bronchial veins, as distinguished from mediastinal cancer, which latter, as Dr. Cockle remarks in his work, may afford no evidence of its existence until pressure symptoms, or infiltration of the surrounding parts, especially the pericardium or large vessels, indicate the presence of a tumour within the thorax.

I will now confine my remarks principally to the symptoms that indicate cancerous engagement of the bronchial glands and lung and their similarity to phthisis, and afterwards to those that indicate engagement of the mediastinum. I have mentioned hæmoptosis as a constant and oft-recurring symptom. Next in importance, as pointed out by Dr. Rossbach, would seem to be early congestion of the larynx, with aphonia, and without paralysis of the vocal cords, which latter symptom I will allude to afterwards as conclusive of mediastinal cancer. Spasmodic cough, with very little expectoration in proportion, as indicating early irritation of the bronchial nerves, frequently accompanied by dyspnœa and vomiting, is another early symptom. Next, dulness on percussion over some portion of the chest anteriorly; but this is not always present in the early stages of cancer of the bronchial glands, though it is the earliest symptom in mediastinal cancer. Feeble respiratory sounds on one side, with bronchial râles, tubular breathing, prolongation of the expiratory sounds, and symptoms indicating pressure on and narrowing of the bronchial tubes, are frequently present. Difficulty in swallowing from pressure on the œsophagus, with cough and vomiting excited by the effort, and a venous hum over the upper portion of the sternum when the head is thrown back, as pointed out by Dr. Eustace Smith when describing the symptoms indicating enlarged bronchial glands, might be placed next in order. Pleural effusion into either one or the other side, containing blood when withdrawn by aspiration. This latter phenomenon is said to be characteristic of intra-thoracic cancer, though microscopic examination of the pleural fluid as well as of the sputa in these cases generally gives negative results as regards the presence of the characteristic cells. If we add to many of the above symptoms in advanced cases and in old people muco-purulent expectoration, emaciation, night sweats, and a moderately high temperature, we have a chain of phenomena that resemble phthisis.

When cancer begins in the anterior mediastinum there may be no cough whatever in the early stage, but there is marked retro-sternal dulness, with sense of resistance, and generally retro-sternal pain. Here pressure symptoms begin to show themselves early, as indicated by displacement of the heart, fulness of the veins in the neck, with cyanosis and œdema of the face and upper extremities, and later on dyspnœa, with stridulous breathing, aphonia, and paralysis of one or other of the vocal cords, as the vagus or recurrent laryngeal respectively get pressed on. Paralysis of one or other of the vocal cords, with symptoms of a tumour within the thorax in the absence of aneurysm, is regarded by Dr. Burney Yeo as absolutely diagnostic of malignant disease. Though the symptoms of cancer of the bronchial glands resemble phthisis very closely, we shall find in the signs occasionally features that raise doubts in our minds as to their being phthisical ones. The dulness on percussion is generally not apical, but lower down over the lung, and is elicited posteriorly opposite to the same situation in front, and is generally more extensive than in phthisis, when the disease is of some duration. There is also generally an absence of all crepitus, though bronchial râles and feeble inspiratory sounds, with prolongation of expiration, are present. When the bronchial glands are much enlarged and compress the bronchi, vocal fremitus and vocal resonance are both absent; and absence of all breath sounds with collapse or consolidation of the lung generally present a condition you will not find in phthisis, no matter how extensive the consolidation. Though many of the above symptoms are present in a good number of the cases of primary cancer of the bronchial glands, in some one of the symptoms will be most marked, and the first of the following cases illustrates the prominence of pleural effusion over all other symptoms.

John G——, aged thirty-eight, a bottle-blower by trade, was admitted into the Mater Misericordiæ Hospital on the 27th of July last, suffering from cough, dyspnœa, lividity of the face, and slightly bloody expectoration. He never had syphilis, rheumatism, or any other illness, though he drank hard at times, and was able to attend to his work, in which he was constantly exposed to draughts for a period of fourteen hours at a time. There was no history of malignant disease in his family. Three weeks before admission, while engaged at his occupation, he caught cold, which showed itself by prolonged rigor, sickness of stomach, and headache with feverishness; he also felt pain of a catching character in the right mammary region. He was confined to bed for a few days with these symptoms; but after this time was able to attend to his work again, experiencing only slight pain in the right side, cough, and shortness of breath. For a week before admission these symptoms became worse, and on admission he presented the following:—Lividity of the lips and face, with puffiness of the eyelids and prominence of the veins on the front of the thorax and also in the neck; no enlarged gland to be seen. His voice was hoarse and aphonic, and there was urgent dyspnœa, especially on exertion, with cough and bronchial fremitus over the chest. The patient seemed in no way emaciated, and did not suffer from night sweats. There was absolute dulness on percussion over the entire aspect of the right chest, except for an inch or two under the clavicle, where it was tympanitic; and behind, the dulness reached as high as the centre of the scapula. In front it encroached across the upper portion of the sternum to the extent of an inch or two beyond its left border, and here the dulness gave great sense of resistance. There was feeble inspiration through the right lung, with bronchial râles in both; and vocal fremitus and vocal resonance were both absent on the right side. The heart was feeble in its action, but not displaced, and no murmur was present either in it or the great vessels. From enlarged measurements of the right side and the above symptoms I considered there was fluid in the pleura, though I could not explain the symptoms of venous pressure from this alone, and could only conjecture there was a tumour within the thorax also. I aspirated the right pleura on the day after his admission, removing nine pints of fluid, the latter portion of which was bloody. After removal of the fluid the dulness was more distinct over the upper portion of the sternum, and could be defined. His dyspnœa was considerably relieved, and more air seemed to enter the

right lung, cyanosis of the head and face, however, continuing, and the veins on the thorax showing more prominently. A week later his right arm and face became very swollen, and, recurring dulness over the right side indicating fresh effusion, I again tapped the pleura and removed six pints of bloody fluid. Some days after the second tapping his temperature rose, his dyspnœa increased, and dulness at the base of the left lung showed itself. Suppression of urine with delirium set in, and he died on August 18th. The post-mortem examination showed a large mass of cancer, both hard and medullary, infiltrating the bronchial glands and lung on the right side, beginning at the bifurcation of the trachea, and involving in its course the pleura, which was thickened, lymphy, and contained a quantity of bloody serum, and infiltrated the pericardium over the auricle, the superior cava of which it compressed. The left lung was congested throughout, and solidified around its main bronchi from recent inflammation.

The following case, in which symptoms of phthisis with difficulty in swallowing were the most prominent features, shows a different train of symptoms:—

James McC——, a waiter, aged thirty-seven, was admitted into the Mater Misericordiæ Hospital on Sept. 22nd last, complaining of cough, with muco-purulent expectoration mixed with blood, night sweats, emaciation, and symptoms of stricture of the œsophagus. The patient gave a good family history; there had been no phthisis on either side. He drank freely, taking as many as eight or ten glasses of whisky daily, undiluted. He had never suffered from any illness until six months before admission, when he noticed a difficulty in swallowing his food, accompanied by cough and vomiting, the food being arrested at a spot which he referred to the centre of the sternum. There was no pain at the place of constriction, and no sense of pressure or dyspnœa. He coughed up frequently considerable quantities of blood, bringing up nearly half a pint six weeks before admission, occasionally being jam-tinted or prune-juiced in colour. On examination the heart was found healthy; no murmur. There was no enlargement of the cervical glands. The throat was congested and the voice aphonic. Dulness was elicited over the upper portion of the sternum, extending to the subclavian space on the right side, with tubular breathing and bronchial râles, but no crepitus. There was no dulness posteriorly, the breath sounds being normal here. An œsophageal tube of the smallest size could be passed, and the stricture only admitted the next size up to the time of his death; all attempts to pass a larger one failed. After catheterisation liquid nourishment could be taken, but it always induced cough at first, ending in vomiting. The temperature throughout varied, rising occasionally from normal to 101·2°. His emaciation and night sweats increased, the tube being passed daily to allow of nourishment being taken until Oct. 17th, when the dulness over the upper portion of the sternum and right apex showed a marked increase, and on the 21st no tube could be passed, the attempts to do so causing considerable pain. Pulmonary congestion set in, and the patient died on Oct. 28th. I regret that in this case no post-mortem examination was allowed, as we should no doubt have found enlarged cancerous bronchial glands pressing on and constricting the œsophagus springing from the fork of the trachea, which would seem to be the most usual site for cancer in this situation to begin.

The next case, a washerwoman, aged fifty, was admitted into my ward in the hospital with feverish symptoms, pain in the left side, dyspnœa, wasting cough, and muco-purulent expectoration mixed with blood, which was constantly present. The patient was seen in my absence by the assistant physician, who diagnosed pleural effusion of the left side, with dulness on percussion at base, absence of vocal fremitus, and resonance. Though no dulness existed in the upper portion of the lung, there was complete absence of all breath sounds here, which seemed rather difficult to explain. The woman showed marked hectic flush, and dyspnœa existed out of all proportion to the pleural effusion. Her illness began about three months previously with pain in the left side, a cough that had existed for some months before, with blood-spitting; but the symptoms were not urgent until a few weeks before admission. There was dulness in front behind the upper portion of the sternum, extending to and becoming continuous with cardiac dulness, but the percussion over both apices was normally clear. The respiration was puerile at the right apex and over the right lung; but there was complete absence of all respiratory sounds over the left apex. The dyspnœa and orthopnœa were most troublesome, and the temperature remained high up to the time of her death, which occurred three weeks after her admission. The post-mortem examination showed dark-coloured serum in the left pleural cavity to the extent of two or three pints. The pleura and lung were adherent at its upper and anterior aspect, with a thickened mass of hard bronchial glands surrounding the root of the left lung, compressing the bronchi and bronchial veins. The lung itself was contracted to half its size, and puckered here and there from emphysematous lobules, and the upper lobes studded in places with cancerous nodules, both medullary and scirrhous, which spread in a radiating manner from its root; between these the lung was solidified and non-crepitant.

I may mention that in both these cases microscopic sections of the deposit showed the typical cells. And in the first two cases, though aphonia and congestion of the larynx were present, there was no paralysis of the vocal cords evident. I need not here allude to secondary cancer occurring in these situations, my object being to show that primary cancer is of the two much more frequent, and that in advanced cases it is likely to be confounded with phthisis.

The general conclusions I have come to with regard to the disease are as follows: That primary cancer of the thorax is of not unfrequent occurrence, generally appearing in hard drinkers, and the symptoms of it are developed apparently after catching cold. That it is to be found in two situations within the thorax—namely, the bronchial glands and the anterior mediastinum; and is of the mixed variety, scirrhous and encephaloid. That persistent blood-spitting is a very usual symptom in its growth, and indicates infiltration of the lung and pressure on the bronchial veins; and that the so-called characteristic red-current-jelly expectoration is a rare symptom. That fixed pain in the thorax is not always present, and when it is, it is more usual in the mediastinal form of the disease. That the disease is generally accompanied by aphonia and congestion of the larynx in its early stages, and by paralysis of one or other of the vocal cords in a later stage. That when in the bronchial glands it is invariably accompanied by symptoms of pressure on either one or other of the bronchi, or on the œsophagus, causing symptoms of stricture. That pleural effusion containing blood is very frequent on the side affected, and in its growth forwards from the root of the lung it involves the pericardium, and causes pressure on the superior cava or pulmonary veins. That when in the bronchial glands its later stages may simulate advanced phthisis very closely. That it may be occasionally distinguished from phthisis by its pressure symptoms on the bronchi, its dulness being more central and more extensive, with absence of crepitus and more urgent dyspnœa, while no bacilli are found in the expectoration. That malignant intra-thoracic disease is generally fatal in from two months to six, though Dr. Walshe gives the average duration as from three months to thirteen. In the cases I have just mentioned the disease was fatal in each case within seven months. I need not here allude to the difficulty in distinguishing between intra-thoracic malignant disease and aneurysm, where no murmur is present and pressure symptoms are the most prominent feature in the case. The difficulties of forming a differential diagnosis in such cases are indeed great—nay, sometimes almost impossible,—and we have mainly to rely on the evidence afforded by arterial disease elsewhere to assist us.

MOLLUSCUM FIBROSUM AND LARGE PENDULOUS FIBROMA;

REMOVAL OF GROWTH; RECOVERY.

BY HENRY A. LEDIARD, M.D. EDIN., F.R.C.S. ENG.,
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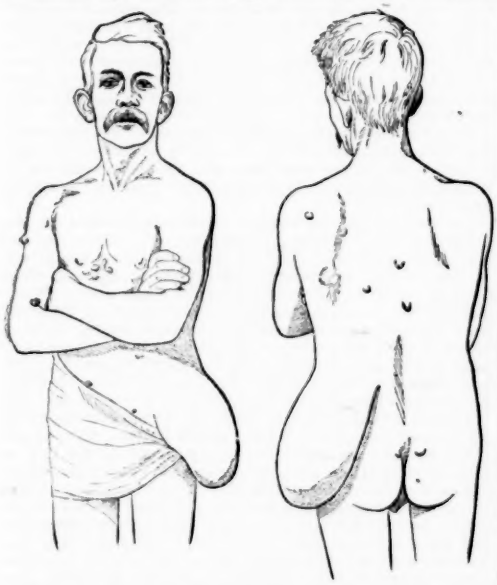
JOHN C——, aged twenty-nine, labourer in a timber yard, was admitted into the Cumberland Infirmary on March 17th, 1886. The patient has never been what is called "quick," and his head has always been very large in proportion to his body. He has had none but ordinary illnesses, with the exception of bronchitis, from which he suffered for the previous three months. He has had from birth a tumour over the left hip, which continued to grow till he was twenty-four, when it ceased growing. In addition to this, he has developed numerous small tumours on various parts of the

body, and he has never had any pain except when some of them have suppurated; but this has not occurred often.

On admission the patient was considerably emaciated and suffering from chronic bronchitis. Studding the upper two-thirds of his body were several tumours varying in size from a split pea to a chestnut, with the exception of the large one about to be described. They were all of them rounded and smooth surfaced, some moving freely beneath the skin, others adherent; many of them had a bluish tint. In two instances these tumours had suppurated and formed abscesses. There was one small tumour behind the left ear, of the size of a split pea; another on the right side of the neck, rather larger; there were several varying in size over the whole back, particularly about the sacrum; some were to be found on the arms and forearms, but none were seen below the trochanters. Situated over the left iliac bone was an enormous pendulous growth, hanging from the tissues about the left crest of the ilium and the left inguinal and lumbar regions. The tumour hung like a satchel, it was ten inches long and about fourteen inches broad at the base. Its surface was superficially ulcerated in patches or excoriated; it was of considerable inconvenience to the patient, but gave him no pain. (See engravings.)

After being under treatment for four weeks the patient's condition improved, the cough ceased, and the ulcerated



surfaces healed; the suppurations in the cellular tissue about the body had dried up, and he had gained flesh. On April 12th the tumour was removed under ether. In order to meet the expected hæmorrhage an iron clamp covered with leather was used, having been specially made by a local ironmonger for the case. It consisted of two long pieces of iron curved on the edge and fastened at pleasure at the two ends by two screws and nuts. The pedicle having been secured by the clamp close to the iliac crest, the tumour was amputated, and as many vessels as could be seen were tied. After this the clamp was a little relaxed, when many more vessels, seen by the spouting of blood, were secured, and the clamp was then removed. Considering the enormous number of vessels, very little hæmorrhage occurred, as the clamp proved most valuable. The lips of the wound were drawn together with silver wire and fishing gut, and the dressing consisted of a large wood-wool pad. On April 20th the drainage tubes were removed. A little suppuration had occurred here and there, but the wound was quite healthy. On April 30th the wound was almost entirely healed, and on measurement was found to extend to fourteen inches. On May 12th the patient went to the convalescent hospital at Silloth.

My thanks are due to our excellent house-surgeon, Mr. G. F. Smith, who was with us at that time, not only for the notes of the case, but also for the care he took in getting the clamp fitted. The patient was shown at the Carlisle Medical Society on Jan. 13th of this year. The wound had remained sound, and little or no deformity was visible, except the linear scar. The man was better able to do his work, but his intellectual deficiency was unaltered. The tumour weighed 6 lb., and has been placed in the Hunterian Museum of the Royal College of Surgeons (No. 373 C.). In structure it was soft and somewhat pulpy, though firm, and under the microscope was seen to consist of white fibrous tissue with spindle-shaped, oval, and round cells, with here and there some glandular tissue; there was, however, no evidence of any morbid activity of the sebaceous glands.

After the patient left the hospital I made some inquiries concerning his mental defect, and was told by his employer that he would do what he was told and was ordinarily useful, but would never make a skilled workman, as he had no ideas. I mention this because Hilton Fagge (vol. ii., page 745) draws attention to Hebra's remark that when molluscum tumours are numerous there is deficiency in mind and body. The engravings were made by Danielsson from photographs, and show the large tumour very well; but many of the small tumours were too minute to delineate, therefore only larger ones are represented.

Carlisle.

REMARKS ON THE

ACCIDENTS WHICH NOT INFREQUENTLY OCCUR TO PARTURIENT WOMEN.[1]

BY WILLIAM DUNCAN, M.D., F.R.C.S.,

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THE accidents of parturition on which I propose to make some remarks are—(*a*) laceration of the cervix uteri; (*b*) laceration of the vagina; (*c*) laceration of the perineum; (*d*) post-partum hæmorrhage. When we consider the wide extent of ground covered by these subjects, it is obviously impossible for me, in the short time at my disposal, to enter into them very fully; nor, indeed, is it necessary, in order to attain my object, that I attempt to do more than put forward the main points; but I wish to lay special stress on some, the importance of which, it appears to me, are not sufficiently recognised or appreciated.

1. *Laceration of the cervix uteri.*—This accident is one of the most frequent that occurs during parturition. Indeed, most likely some slight tearing takes place in almost every case, but this kind (as it speedily heals) is of no importance, except that it may, unless antiseptic midwifery is carefully practised, be the path by which septic material becomes absorbed, and either pelvic cellulitis or puerperal septicæmia be set up. Lacerations, on the other hand, which extend through a great part of the infra-vaginal cervix, or even up to the vaginal reflexion, have, in addition to the danger of septic absorption, both immediate and remote effects of great importance, which are far too frequently ignored, and even denied, by some experienced gynæcologists, but which I confidently assert from personal observation to be potential factors in the causation of puerperal and chronic uterine disease. Opinions differ as to the frequency with which these deep lacerations occur, and when occurring cause uterine disease; for there is no doubt that an extensive laceration sometimes exists in women who are apparently in perfect health. Emmet[2] says that 32·80 per cent. of all women under his observation who had been impregnated and had suffered from some form of uterine disease were found to have laceration of the cervix. Pallen[3] asserts that the condition exists in 40 per cent. of women with uterine disease. Goodell[4] states that about one in every six women with uterine disease has an ununited laceration of the cervix; whilst Mundé[5] found on examining 2500 parous women that 25 per cent. had well-marked laceration, but that only about 11 per cent. showed symptoms and required treatment. My own investigations have shown me that about 27 per cent. of all the mothers I examined had decided laceration, and about 6·5 per cent. required local treatment.

[1] Read at a meeting of the Cambridge Medical Society.
[2] Principles and Practice of Gynæcology. Third edition, p. 444.
[3] Mundé's Minor Surgical Gynæcology. Second edition, p. 435.
[4] Ibid. [5] Ibid.

It is evident, therefore, that whilst this lesion occurs frequently during childbirth, only a comparatively small proportion of all the cases is sufficiently important from a pathological point of view to merit recognition as causing uterine disease; the proportion is, however, more than sufficient to call for our careful attention as to its preventive and curative treatment.

The causation of these lacerations is much disputed; some consider they occur more frequently when rapid dilatation of the cervix takes place, others that the opposite condition (tedious labour with rigid cervix) is the chief cause, and this certainly was stated to be the kind of labour in the great majority of the cases of extensive laceration which have come under my notice. Two other causes must be noted:—(1) that pernicious kind of meddlesome midwifery where an attempt is made to hasten the dilatation of a somewhat rigid cervix by sweeping one or two fingers rapidly round its inner surface, at the same time endeavouring to push the cervix over the head; and (2) the application of the forceps before full dilatation has taken place, and then the speedy delivery of the child. No doubt it is very tempting to one who is an adept in the use of the forceps, especially if he be overworked, to have recourse to a proceeding which will soon set free both his patient and himself; but I feel sure if he will make a careful digital examination about a fortnight later (as I maintain should be the invariable practice of every obstetrician), he will find a much larger percentage of torn cervices amongst those cases where, with the above mentioned condition, he has used the forceps than in those where he has administered some chloral or chloroform. On the other hand, I quite agree with Mundé[6] when he says "an experienced operator, by gently and gradually evolving the head and regulating its progress with the forceps, may even prevent a rupture both of the cervix and perineum." Now, whilst it is generally admitted that very few women are confined at term without sustaining some laceration of the cervix, there is great difference of opinion as to what percentage (if any) require operative interference later on. Dr. J. Henry Bennet,[7] in a paper read before the International Medical Congress in 1881 said "he thought the operation a totally unnecessary one, unless in some extreme exceptional case." This view is also held by some gynæcologists of experience, to whose opinions much weight should be attached. On the other hand, I am bound to say that the opposition to trachelorraphy is, as far as I know, limited to those who have never yet performed the operation, whereas it is viewed more or less enthusiastically by those who have practical experience of it. In the discussion which ensued on Dr. Bennet's paper there was an unanimity of opinion as to its value in suitable cases; and I think we are much indebted to Dr. Playfair[8] for being the first in this country to bring the subject in all its bearings into notice. Having performed the operation twenty-seven times, I can speak confidently as to the immense relief it affords in the vast majority of cases. I would here point out the great value of Sim's speculum, not only in the diagnosis of laceration of the cervix, but also in many other uterine diseases. Indeed, the ordinary tubular or Ferguson's speculum is worse than useless in those cases where laceration with ectropion exists, as it rolls in the everted edges of the torn lips, and then the appearance resembles an ordinary (so-called) "ulceration of the os." For the last few years I have discarded it altogether, except to demonstrate to my class the totally dissimilar and deceptive appearances seen on looking through it at well-marked cases of laceration, compared to those found on using the duck-bill, gently pulling down the uterus with a vulsellum forceps, and then approximating the torn edges with a pair of tenacula.

The *immediate* results of a laceration may be either hæmorrhage or septic absorption. Cases of post-partum hæmorrhage occasionally occur where the uterus feels well contracted; the hæmorrhage must then necessarily be due to a laceration either of the cervix or some other part of the parturient canal. It is, unhappily, of not very uncommon occurrence that a woman's temperature, within a few days after her confinement, runs up with the usual febrile symptoms and pain in the lower abdomen or pelvis. On examination, we find a cellulitic exudation in one or other broad ligament, which either becomes absorbed after a time, leaving more or less permanent injury in the shape of flexions, adhesions, &c., or it goes on to suppuration. In other (and fortunately rarer) cases puerperal septicæmia, with all its accompanying grave dangers, sets in. Now, on examining a puerpera, in whom inflammatory symptoms have supervened, there will be found present (almost invariably) lacerations either of the cervix, vagina, vulva, or perineum; and these lesions, when carefully inspected, will be seen to have a sloughy appearance. Steurer,[9] on investigating an epidemic of puerperal fever at Strasburg, found diphtheritic patches on the vulva, and from these traced bacteria into the connective-tissue spaces, where their presence gave rise to cellulitis. From the spaces they entered the lymphatics, causing lymphangitis.

The *remote* effects of laceration depend on the extent of the injury: they may be *nil*, or we may have any of the following—namely, subinvolution going on to areolar hyperplasia of the cervix or whole uterus (so called chronic metritis), endometritis, cystic degeneration of the cervix, uterine displacements, chronic pelvic peritonitis and cellulitis, chronic ovaritis, sterility or abortion, and, lastly, it is said to predispose to epithelioma—a truly formidable list.

It is curious, as Mundé observes, that sterility and abortion should result from the same pathological process; but it is, nevertheless, true in some instances. One of my cases was a most interesting example of repeated miscarriages resulting from laceration of the cervix. The patient had had seven miscarriages (all at about the same date) since her confinement six years previously. There was no sign or history of syphilis, and no uterine displacement, but there was a deep laceration, reaching up to the vaginal roof, with much hypertrophy and eversion of the cervix, and this condition appeared to me to be the *fons et origo mali*. Her subsequent history proved the correctness of the diagnosis; for, three months after I had successfully performed Emmet's operation, she again conceived, and this time went on to term, and was safely delivered without relaceration of the united cervix.

Treatment.—The preventive treatment consists in the judicious use of opium, chloral, or chloroform, in the avoidance of all manipulative efforts to dilate the cervix with the fingers, or attempts to apply the forceps and effect delivery before complete dilatation has taken place. When a laceration occurs, it has been recommended by Pallen of New York to have recourse to immediate suture. Having failed to check by a tampon post-partum hæmorrhage from a lacerated cervix, he passed Sim's speculum, sewed up the laceration with silver wire, and thus stopped the bleeding. For my own part, in a case of that kind, I should first try hot water injections, and if these failed then operate, using all precautions possible to avoid septic trouble. If, however, there be no hæmorrhage, it seems to me better not to attempt immediate suturing, as many lacerations which appear deceptively large just after parturition become much smaller and of no consequence (or even completely unite) if the patient be kept strictly quiet for three or four weeks, and have a hot vaginal douche used night and morning. Here we see the importance of making a vaginal examination before ceasing our attendance, in order to satisfy ourselves that no laceration of any moment exists. It is obviously beyond the scope of this paper to enter into the treatment of old laceration of the cervix or of the conditions it may give rise to.

2. *Laceration of the vagina* may be of two kinds: superficial and deep. (*a*) *Superficial* lacerations occur very frequently, and are, as a rule, mere denudations of the mucous membrane, by the passage of the head. They afford facilities for the entrance of septic germs into the system, as seen by Steurer's researches, before alluded to. Their treatment consists in the antiseptic management of the puerperal state, as will be discussed later. (*b*) *Deep* lacerations may occur at any part of the vagina, but they take place most commonly at the lowest part in the structures which form the pelvic floor; they are very important from their ulterior consequences, and special attention has been drawn to them by Emmet of New York[10] and Schatz of Rostock.[11] Emmet considers the lesion to be a separation and tearing of the connective tissue and fascia of the pelvic floor. He says: "Under certain circumstances, in childbirth, the soft parts of the vagina are crowded up in advance, as the head passes along the floor of the pelvis. Laceration, if it occurs, does not take place in the posterior commissure of

[6] Op. cit. [7] Trans. Internat. Med. Congress, 1881, vol. iv., p. 337.
[8] Notes on Trachelorraphy or Emmet's Operation, Obstetrical Trans., vol. xxiv., p. 54.

[9] Hart and Barbour: Manual of Gynæcology, 3rd ed., p. 146.
[10] Principles and Practice of Gynæcology, 3rd ed., p. 368.
[11] Centralblatt für Gynäkologie, Band xi., Oct. 8th, 1883.

the labia majora, but somewhere within the canal, and it is only as the shoulders escape that the rent is completed externally. The soft parts may be lacerated or not, but in many instances, before they are torn, I believe the fascia extending from the sulcus on each side becomes separated from its connexion with the vaginal outlet, and thus separation may take place without any external injury. We have then the condition I have compared to the mouth of a bag with a running string." Schatz says, "Hitherto neither the frequency nor the clinical significance of lacerations of the muscles of the pelvic floor has been sufficiently appreciated. In their connexions with displacements of the pelvic organs, and especially with prolapse, they are quite as important as, if not more important than, laceration of the perineum." The result of these lacerations is, as Schatz observes, that we not infrequently see cases of rectocele, cystocele, and prolapsus uteri, *where there is a fairly good perineum*, so that this structure, although it undoubtedly forms a small but strong part of the sacral segment of the pelvic floor, and thus aids in maintaining the pelvic organs in position, does not constitute, as was formerly supposed, the "keystone of the arch." My attention was specially drawn to these lacerations of the pelvic floor by Dr. Emmet, whom I have seen perform, in the New York Women's Hospital, his plastic operation on the posterior vaginal wall for their cure, and I have since then several times similarly operated, with great relief to the patients. With regard to immediate treatment (as these lacerations are usually associated with more or less tearing of the perineum), it becomes, as Emmet points out, even more important to operate immediately than it would be if the perineum were alone implicated. By closing a lacerated perineum just after delivery, if it be a superficial rent, the operation of itself would be of little importance, beyond lessening the danger from blood poisoning; but it gives the opportunity for the introduction of deep sutures, which may again bring together the separated muscular fibres of the vagina.

(To be concluded.)

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. THOMAS'S HOSPITAL.

TWO CASES OF PAPILLOMA OF THE BLADDER REMOVED BY THE WIRE ÉCRASEUR—IN ONE (MALE) BY SUPRAPUBIC CYSTOTOMY, IN THE OTHER (FEMALE) BY THE URETHRA; CURE.

(Under the care of Mr. SYDNEY JONES.)

THESE cases are good examples of the clinical history of vesical tumours of a simple kind, in which hæmorrhage of a definite character has been the most marked symptom. From the sex of the second patient an attempt was made (and successfully) to remove the tumour through the urethra rather than after suprapubic cystotomy, although it was of considerable size for passage along that canal. In each the growth was attached by a well-defined pedicle, and its simple character and complete removal will probably render the success of the treatment permanent. We are indebted for the following notes to Mr. Cecil W. Cooke.

CASE 1.—W. B——, male, aged fifty-four, a blacksmith, was admitted on March 21st, 1887, having previously been under the care of Dr. Phillips of Tickill, near Rotherham. Two years previously to admission he first began to pass blood occasionally with his urine. The attacks of bleeding used to last from four to six weeks, and would then pass off for about the same length of time. The intervals between these attacks have been gradually diminishing, and for the last six months he has always passed blood in his urine. The blood was generally mixed with the urine, but sometimes came afterwards, and sometimes there were clots, the passage of which caused pain. Otherwise there appeared to have been little or no pain in connexion with the symptoms. There was some increased frequency of micturition. During the last three months he had been losing flesh, was looking very anæmic, and getting much weaker.

On admission no calculus could be detected by the sound; something soft might be felt projecting from the right side of his bladder; microscopical examination showed some grouped cell growth. It was evident that the symptoms complained of by the patient were dependent on the presence of tumour. The patient was a stout man, with a deep perineum, and it was certain that an attempt at removal of any tumour would be much more difficult and unsatisfactory by the perineum than by a suprapubic cystotomy. An exploration through the perineum was not thought necessary or desirable, so that it was determined to perform at once a suprapubic operation. This was done by Mr. Sydney Jones on March 30th. Into the bladder ten ounces of boracic solution were injected; and into the rectum was inserted an oval indiarubber bag, which was distended with sixteen ounces of water. These injections were retained under the ordinary method. There was no difficulty in exposing the bladder uncovered by the peritoneum, nor was there any hæmorrhage worth notice. A vertical incision was made into the bladder; this incision enabled one easily to pass the forefinger, by which the interior of the bladder was explored. A fimbriated papillomatous tumour about the size of a walnut was at once discovered on the right side of the bladder, about, but rather above and in front of, the situation of the right ureter. The loop of a wire écraseur was carefully placed around the attachment of the tumour, and, fixed there by the left forefinger, was tightened by screwing with the right hand until the tumour fell off and was removed. The removal was found to be effected flush with the surface of the mucous membrane; and there was comparatively little hæmorrhage. The bladder was well washed out with boracic lotion. The upper part of the abdominal wound was brought together by sutures. The bladder was not sutured, but a large drainage-tube inserted. No catheter was inserted in the urethra. The wound was lightly covered with iodoform gauze.

March 31st.—A little tenderness about the abdomen made one think it desirable to remove the stitches.

April 4th.—The patient has been going on very well since the above note, and has had little or no pain. The bladder has been washed out with boracic lotion every day. The temperature has varied from normal to 101·6°.

9th.—During the last two or three days the patient has been passing a little urine by the urethra. The wound looks quite healthy, and his condition is improving.

18th.—Amount of urine increasing through the urethra, less through the wound.

23rd.—The patient improves steadily. Wound filling up; edges brought into closer apposition by strapping.

May 4th.—Since May 1st (about one month after the operation) the man has passed all his urine by the urethra; wound almost filled up.

10th.—The patient got up to-day. Wound now quite healed, and the man is well in every way. The anæmic condition, which was so evident on his admission, is quite recovered from. He left the hospital quite well a few days later.

The specimen is now in St. Thomas's Hospital Museum. It was examined by Mr. Shattock, and its structure was pronounced to be simple papilloma.

CASE 2.—F. M.——widow, aged fifty-eight, was admitted on May 23rd, 1887. About six years previously she first began to pass blood with her urine. At that time it continued for two or three days, and she saw no more of it for three or four months. The attacks of hæmorrhage have more and more frequently occurred; and on May 13th, ten days before her admission, she had a pretty severe and continuous attack, for which she consulted a doctor, who sent her into the hospital. Whenever she passed blood she suffered pain, but not at other times, and when clots were present she had frequency of micturition, amounting almost to a state of incontinency. The medical man whom she consulted, and who sent her into the hospital, sounded her and said she had a "tumour."

When admitted, the woman said that she had continuous

pain, much worse when passing urine, not worse when moving about; that it was worse when the bladder had been emptied. However, on examination she seemed to have incontinence; there was continuous trickling from the urethra of slimy blood-stained urine. On May 28th Mr. Sydney Jones examined with a sound. There was no calculus, but there was a sensation of thickening in the posterior wall of the bladder. Microscopical examination of the urine showed blood-corpuscles, pus-cells, crystals of triple phosphate, amorphous phosphates, but no cell growth enabling one to arrive at a diagnosis of tumour.

On June 3rd the patient was put under ether; the urethra was dilated, and the bladder explored by the forefinger. A tumour was then felt, cauliflower-like, floating in the bladder, about the size of a Tangerine orange, and attached by a pedicle about half or three-quarters of an inch in length to the floor of the bladder, about an inch behind the vesical orifice of the urethra. The pedicle could be distinctly felt, and gave one the impression of being the thickness at least of an ordinary goose quill.

On June 8th the patient being again put under ether, Mr. Sydney Jones operated. The forefinger was passed through the dilated urethra into the bladder so as to feel the pedicle. A catch forceps was then passed into the bladder so as to secure the pedicle below the forefinger. The pedicle and tumour were then drawn forwards, and the noose of a wire écraseur was passed over the tumour and forceps, and a few turns of the screw readily detached the tumour. There was no hæmorrhage from the divided pedicle. The size of the removed tumour was less than when examined with its normal distension and vascularity. When removed it was the size of a walnut, and in water presented a beautifully villous character. Mr. Shattock, who described it as a charming specimen, looks upon it as simple papilloma. The specimen is in St. Thomas's Museum. The bladder was washed out well with boracic lotion, and a large-sized catheter was left for some hours in the urethra.

There is nothing to record in connexion with the after symptoms. The patient went on continuously well. Only on the night of the operation did her temperature reach 100°; afterwards it was normal. She left the hospital on June 27th, nineteen days after the second dilatation of the urethra and the removal of the tumour. On her discharge from the hospital there was no incontinence, no blood in the urine, and no pain.

The patient was again seen on July 4th, and was in excellent health.

Remarks by Mr. SYDNEY JONES.—The above cases are of interest in that both presented the characteristic symptom, in the first place, of hæmorrhage without any additional symptom. In the first case there was in the later stages some frequency of micturition, but pain only during the passage of clots. He was rapidly going to the bad from loss of blood. In the second case, that of the woman, there was at first hæmorrhage; later on pain and incontinence, probably due to the attachment of the tumour, the pedicle of which was placed only a short distance behind the vesical orifice of the urethra, so allowing the tumour to be washed forwards and to obstruct the exit of urine. In the first case there could be no doubt of the existence of tumour. It was certainly the course to pursue to do a suprapubic cystotomy at once, without any preliminary perineal operation; and in any similar case I should at once follow the same course. The suprapubic operation enables one to expose the tumour in the best manner possible, and to use those means best adapted for its perfect removal. The bladder, too, is easily explored for any other growth. I do not consider, with the peritoneum well out of the way, and with free drainage subsequently provided for, that the suprapubic operation is a serious one. For tumours, I think, the suprapubic operation is the one to be selected. For stone, in my opinion, this operation should be selected for large calculi. The same objection exists against operating for vesical tumours through the perineum as for stone. In the case of the male above referred to, one month was occupied for the healing of the suprapubic wound. Suppose the operation had been done through the perineum, not less time in healing would have been occupied, and one would have had more difficulty in exploring and thoroughly removing the tumour. In the case of the woman, the tumour was so easily accessible through the dilated urethra, that no better operation could be suggested than that which was carried out.

SAMARITAN HOSPITAL FOR WOMEN, NOTTINGHAM.

A CASE OF NEPHRECTOMY FOR HYDRONEPHROSIS; REMARKS.

(Under the care of Dr. ELDER.)

A. S——, aged twenty-three years, single, was admitted on April 9th with a well-marked abdominal swelling on the right side. The following history was elicited. It is now seven years ago since first an aching pain in the right side, not constant but intermittent, was experienced by the patient. Machining, which occasionally had to be done in her occupation of dressmaking, or any unwonted and severe exertion, caused this discomfort, and its relief always followed resting. For several months this state of matters went on without affecting her general health, when suddenly and spontaneously it ceased and caused no further trouble for the space of three years and a half. Then an attack similar to the present came on and a "lump" on the right side now was recognisable. After a duration of three months this swelling disappeared as suddenly as it came. It had caused no particular symptom, but merely a sense of prostration. Again, six weeks prior to admission, the tumour rapidly reappeared, accompanied this time by pain, sickness, and slight constitutional disturbance. During this last invasion the patient has lost flesh, but otherwise her health is unaffected. When walking, standing, or lying on the left side a dragging, sickening sensation is complained of. There has never been hæmaturia or other unhealthy condition of the urine, and menstruation has been uniformly normal.

The objective signs were as follows: On the right side there was an irregularly-rounded, prominent swelling, insensitive and fluctuant, which when the patient lay on her back naturally fell into the right renal position, but which was freely movable, either by changes of recumbency on the part of the patient or in obedience to manipulation. It pretty well filled up the space between the ileum and the lower border of the liver. Evidently overlapped in front by the ascending colon, as manifested by the percussion note, in other parts it was quite dull. No pelvic or hepatic connexion could be made out, so the diagnosis lay between a floating kidney which had become hydronephrotic, or renal hydatids—the former being looked upon as the most probable one. The urinary secretion was plentiful, normal, and with a 2·4 percentage of urea.

On April 13th the tumour was aspirated behind the peritoneal reflexion and eighteen ounces of straw-coloured fluid withdrawn. This had a specific gravity of 1004, was very slightly albuminous, contained no hooklets, but showed a few crystals resembling urea nitrate. Within a few hours the swelling was as large as before and caused pain; so taking into account that renal extirpation in a patient otherwise healthy, and with the other kidney sound and able to perform the necessary compensatory function, is not so much more serious than a nephrotomy, this operation was decided upon and carried out on April 19th by the lumbar method. The comparative absence of peri-renal fat was noted at the time. The after progress of the case was one of uneventful progress towards recovery, the temperature only rising to 99° F. once, and this on the advent of a menstrual period. The patient left the hospital on June 5th with part of the wound not quite healed. The specimen removed showed the cyst to be composed of the upper part of the ureter and the pelvis and calices of the kidney, of which the greater part of the secreting tissue had become absorbed.

Remarks by Dr. ELDER.—The history of the above case points pretty clearly to its being an instance of a movable kidney becoming cystic owing to interference with the urinary flow, by reason of kinking and impermeability of the ureter. Intermittent hydronephrosis is thus explained—a condition which usually becomes permanent by virtue of the structural changes which take place in the walls of the ureter from the alternations of extreme tension and evacuation. This doubtless happened in my own case, thus explaining the repeated suddenness of the onset and disappearance of the swellings. Calculous impaction of the ureter, pressure from without by ovarian or malignant tumours, and bands of cicatricial tissue in the pelvis, are well-recognised causes of this pathological condition.

With regard to the treatment of these cases, allow me to draw attention to a few statistics from Gross's monograph on Nephrectomy, published in 1885, and which includes all the cases of extirpation and allied operations obtainable from public and private sources up to date. Of six cases of aspiration, three were cured, two improved, and one died from some cause unconnected with the operation. Five cases were injected with tincture of iodine, of whom two were cured and three died. Of fifteen cases of puncture, twelve died, one was cured, and two had temporary relief. Incision with drainage in twenty-five cases cured twenty-one, and there were four deaths. Of these the mortality was most by the ventral operation. Of the twenty survivors (for some reason one is left out by the author), eleven have urinary fistula, of whom two have been relieved of this discomfort by a nephrectomy. Extirpation has been performed twenty-one times, with a total mortality of 38·09 per cent. Ten deaths were recorded out of seventeen ventral operations, and one of four lumbar. Gross, as the result of these investigations, recommends in the first instance aspiration of hydronephrotic tumours, then, if necessary, incision and drainage, in preference to the more serious operation of removal of the organ. It seems to me that, failing a cure by aspiration, a lumbar nephrectomy, in an otherwise good and young subject, is very little more dangerous than a nephrotomy, and is not followed by all the unpleasantness of a primary fistula, which, as we have seen, follows the majority of cases of incision and drainage. The present makes my fifth nephrectomy, with one death—the remaining three, previously reported in the pages of this journal, being in good health.

WOLVERHAMPTON GENERAL HOSPITAL.

ANEURYSM OF CORONARY ARTERY; RUPTURE; NECROPSY; REMARKS.

(Under the care of Dr. MALET.)

FOR the following notes we are indebted to Mr. Arnold Evans, house-physician.

J. D——, aged five, was admitted on Jan. 29th, 1887. He was a pale, emaciated, and feeble child, with scarcely sufficient strength to walk; he had three small unhealthy-looking sores, two on the face and one on the leg. His father, who brought him, said that for three weeks the child had suffered intensely from thirst and copious diuresis, the former being so distressing that he would even drink dirty water from puddle-holes in the road. Enormous quantities of urine were passed after admission, and a specimen examined was pale and clear; it had a specific gravity of 1002, and contained neither sugar nor albumen. The thoracic organs were examined, but nothing abnormal detected. When attempting to sit up in bed on the morning of Feb. 1st he complained of pain in the chest, then fell back and died almost instantaneously.

At the post-mortem examination the pericardium was distended with about five ounces of clotted blood, adherent to the walls of the heart. The ventricles were contracted and empty; valves competent and healthy. On removing the clots, a softened spot, surrounded by ecchymosis, was discovered in that part of the wall of the left ventricle which is overlapped by the appendix of the left auricle, the auricular appendix itself being discoloured externally, but its internal surface quite healthy. A probe passed along the left coronary artery from the aorta appeared at this softened point, and on dissecting out the artery it was found that its lumen at the above-mentioned point was increased and its walls attenuated, the aneurysmal dilatation thus formed being about the size of a pea. It was clearly from a rupture of this aneurysm that the hæmorrhage had occurred.

Remarks by Mr. EVANS.—Attention having been called to hæmo-pericardium in a recent issue of THE LANCET by Mr. J. W. Batterham, I have been induced to report the above case. Although hæmorrhage into the pericardium is of frequent occurrence from a variety of causes, it rarely happens that rupture of an aneurysm of the coronary artery occasions it. I have been able to find records of nine similar cases, a *résumé* of most of which by Dr. Crisp will be found in the twenty-second volume of the Transactions of the Pathological Society; in most of these cases, however, the subjects had reached an advanced age, and the chief interest of the case just recorded is centred in the age of the patient.

Medical Societies.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

An Improved System of Flush Closets for Small House Property.—The Powers and Responsibilities of Local Authorities in regard to Rabies.

A MEETING of this Society was held at the Scottish Corporation Hall, Crane-court, Fleet-street, on Friday, May 20th, Dr. Alfred Hill, President, in the chair.

The Council presented the following report, which was adopted:—1. That the annual meeting be held at a date shortly preceding the October meeting, so as to enable the proposed amalgamation of the various societies to be completed and the officers for the ensuing session chosen from the reconstituted society. 2. That the dairies, cowsheds, and milkshops regulations as amended be issued.

The PRESIDENT referred to the loss the Society had sustained by the death of Dr. Iliff, and it was unanimously resolved that a letter of condolence be sent to the bereaved family.

The PRESIDENT read a paper on an Improved System of Flush Closets for Small House Property. After referring to the different methods of excremental refuse disposal and the disadvantages attending each, Dr. Hill explained his method by which slop water was utilised, which, being of higher temperature than water supplied by the mains, prevented pipes from freezing. The amount of water thus made available he estimated at fifteen gallons per day in a small house, or 150 gallons for a court or row of ten houses, a larger amount than is used in connexion with an ordinary closet supplied from a cistern. Slop water and surface water are conveyed to a tank which is constructed in two chambers, the first to arrest earthy and other solid matters, the second to constitute an automatic flushing tank, which, however, is only necessary in cases of one or two houses in which the quantity of water might prove insufficient. From this second tank the water is discharged into a horizontal glazed pipe, twelve by ten inches in diameter, in connexion with the sewer from which it is disconnected by a syphon trap, to which access is given by means of a man-hole. The closets are placed over this pipe, and beneath each seat is a perpendicular salt-glazed stoneware pipe connected with that below; the upper aperture of the perpendicular pipe is about seventeen by fifteen inches in its diameter, the lower twelve by ten inches. At the junction of the two the lower opening is received into a collar; the vertical pipe is so shaped that its posterior wall is perfectly vertical, while its anterior wall towards the lower end inclines in a straight line backwards and downwards, causing a narrowing of the lower aperture, to enable it to enter the collar or flange of the horizontal pipe; the latter is ventilated by a separate vertical pipe connected with it and running up the side of the house in a suitable position. Dr. Hill stated that this arrangement had the advantages of cleanliness and cheapness, and was being largely adopted in Birmingham.

Dr. WHITELEGGE, medical officer of health for Nottingham, read a paper on the Powers and Responsibilities of Local Authorities in regard to Rabies. In the first part of the paper the questions which present themselves to a local authority in considering its action in regard to rabies were examined from the point of view of the medical officer of health. These questions were stated thus:—1. Is rabies likely to become prevalent in the district? 2. By what means is it liable to be introduced and maintained? 3. What evidence is there of the utility of the preventive measures authorised by the Rabies Order of 1887, and the Dogs Act—viz., compulsory muffling and the slaughter of stray dogs? 4. What form should such regulations take? As bearing upon the first question, it was shown that before the number of known cases was such as to excite alarm, the disease must be already widely spread. Rabies could be detected with certainty, both by its symptoms and by the evidence attainable after death, but the great majority of cases doubtless occurred among vagrant dogs and other animals never coming under observation; and, apart from the fact that even the most characteristic symptoms were frequently overlooked by the owners of dogs, it was common for an affected animal to wander away from home in the earliest stage of the disease. The second question was answered by pointing out that the bite

of a rabid animal was beyond doubt the cause of many cases, and could scarcely ever be logically excluded, even if not proved. The alternative theory of origin *de novo*, or even origin otherwise than from a previous case of rabies, was shown to be unsupported by evidence, and indeed opposed to the experience of other countries. The history of rabies in Sweden, Malta, Mauritius, Réunion, and South Africa proved that cases did not arise apart from the introduction of rabid animals. Thirdly, a brief account was given of the complete success of preventive measures in Sweden and Réunion, and of the immense reduction in deaths from hydrophobia in less isolated countries, such as Prussia, which had adopted the same measure. The statistics of Berlin and London were taken as examples of the suppression of rabies in large cities by such means. Finally, it was urged that the regulations, both for muzzling and for the slaughter of stray dogs, should be stringent and rigidly carried out for a sufficient length of time. As regards the advice to be given to a person bitten by a rabid animal, it was premature as yet to pronounce any final opinion upon M. Pasteur's procedure, but for present purposes the problem might be regarded as an alternative between accepting his treatment, and thus joining those of whom 2½ per cent. die with or without the horrible symptoms of ordinary hydrophobia, or rejecting the treatment and sharing the risk of those of whom not less than 16 per cent. die of hydrophobia. In many instances it was essential to determine with certainty the existence or non-existence of rabies in a given animal, where this could only be done by experimental inoculation. Not only was this forbidden by law as regards ordinary individuals, but there was in England no official institution to which application could be made, and it therefore became necessary to appeal to the charity of the Brown Institution. The history of rabies in Nottingham and the adjacent rural districts during the years 1885-6-7 was then referred to at some length, and the results of the application of muzzling regulations in the borough shown to be confirmatory of their value. A temporary suspension of muzzling led to a considerable increase in the number of known cases of rabies, followed by a rapid reduction upon the re-enforcement of the regulations. Statistical and other details were given of the fifty-nine reported cases of rabies. The means adopted for sending patients to M. Pasteur were described, and also the precautions necessary in order to obtain experimental verification of the diagnosis of rabies in cases of doubt. The spinal cords of seven presumably rabid animals had been forwarded to Professor Horsley for examination, with an affirmative result in every instance. Nine patients from the Nottingham district had undergone Pasteurian treatment, and all of these remained in good health. The only case of hydrophobia was that of a man who was bitten by a strange dog four months previously, during the abeyance of the muzzling regulations. In conclusion, it was pointed out that rabies could not be permanently stamped out except by the co-operation of neighbouring districts, and that in an island such as this only a determined effort was needed in order to banish for ever rabies and hydrophobia.

CAMBRIDGE MEDICAL SOCIETY.

AT the meeting on May 6th, the following communications were made:—

Abscess between the Spleen and Diaphragm, with Secondary Pyæmic Abscesses in the Liver.—Mr. M. GRIFFITHS read the notes of this case, a woman, aged twenty-two, single, who had been admitted into Addenbrooke's Hospital, under Dr. Bradbury, on Feb. 23rd last. Her father, mother, and one sister died in decline. She suffered occasionally from dyspepsia, but was fairly well till February 1st, when she had pain behind the sternum, but improved under medical attendance until Feb. 19th, when she had frontal headache and shivers; no cough. On admission, she was pale, and complained of pain in the left shoulder, loss of appetite, and weakness. The physical signs pointed to commencing consolidation at the apex of the right lung, and there was a friction sound with the heart. The temperature was 102·2° morning, 105·6° evening. Pulse 120. The urine contained some albumen. For the next few days she had much pain behind the sternum and an attack of dyspnœa, and on March 8th some dulness was noticed at the base of the left lung with bronchial breathing. The temperature was partially controlled for a day or two with antipyrin. But diarrhœa and great prostration came on, and she died on March 18th.

The necropsy revealed a large abscess, containing a pint of thick pus, situated between the diaphragm and the diaphragmatic surface of the spleen. The walls of the abscess were formed by the diaphragm and the capsule of the spleen. The splenic pulp was soft and diffluent. The heart was healthy; the kidneys slightly enlarged. There were a few recent adhesions over the front of the left lung, and collapse and pneumonic consolidation at the bases of both lungs, the left being firmly adherent to the diaphragm. The liver contained numerous small pyæmic abscesses.

On the Accidents which not infrequently occur to Parturient Women.—Dr. WILLIAM DUNCAN'S paper on this subject is published on another page.

Early Decidua from the Human Uterus.—Mr. WHERRY exhibited a complete decidual cast of the uterus and Fallopian tubal extremities. There was no ovum, nor spot where the ovum might have lodged. It came from a young, childless, married woman, with the following history: A year previously she had some menorrhagia and pain in the body, which was thought to be gall-stones. She recovered and was well and regular in her periods during twelve or thirteen months, when she missed two periods. She then rode twenty miles on a tricycle in one afternoon. This performance was followed in a few hours by a violent attack of vomiting and abdominal pain. All the signs of peritonitis appeared; then subsided in ten days, leaving some fluid in the abdominal cavity; menstruation then began and the decidual cast was expelled. She made a good recovery.

Reviews and Notices of Books.

The Student's Guide to Diseases of Children. By JAS. FREDK. GOODHART, M.D., F.R.C.P. Second Edition. Pp. 692. London: J. and A. Churchill.

Treatment of Disease in Children, including the Outlines of Diagnosis and the chief Pathological Differences between Children and Adults. By ANGEL MONEY, M.D., M.R.C.P. Pp. 560. London: H. K. Lewis.

Clinical Studies of Disease in Children. By EUSTACE SMITH, M.D., F.R.C.P. Second Edition. Pp. 318. London: J. and A. Churchill.

OF these three books, the first two go over the whole field of children's diseases, Dr. Angel Money mainly confining himself to treatment, Dr. Goodhart entering more fully on pathology and symptoms. Dr. Eustace Smith, after a general introduction on the peculiarities of the constitution of early life, and their modifying influence on disease, and after laying down rules for the clinical examination and treatment of children, devotes the rest of his book to the clinical aspects and pathology of certain diseases of the respiratory organs and of tuberculosis.

Dr. Goodhart's work, of which this is a second edition, gives in a short compass, a very clear and concise account of all the more important diseases of children, with their treatment. It is by no means a mere compilation, but contains the results of the author's own experience at the Evelina and Guy's Hospitals, and though intended as a student's manual, for which it is well adapted, it will be found equally useful by the practitioner who wishes to have in a small space the modern views on the pathology and treatment of children's diseases.

Of Dr. Money's work, which is essentially one on therapeutics, we can also speak highly. It gives a pretty complete exposition of the various methods of treatment which have been recommended by different authorities, and embodies the results of the author's experience at the Great Ormond-street Hospital. Avowedly with the intention of making his work as complete as possible, the author has introduced an unnecessary number of plans of treatment of a very dubious or even positively injurious nature; but his own recommendations are judicious and will meet with

general approval, and it is satisfactory to see how great is the general agreement on questions of treatment of all three authors.

On the important subject of the artificial feeding of infants both Dr. Goodhart and Dr. Money give very full directions, and are in the main in accord. The great advance which has been made in a scientific preparation of artificial foods has rendered the bringing up by hand a much easier task than it was formerly. They both give the formula for the preparation of the artificial human milk, and speak highly of it, as it well deserves; and if its use could be introduced among the poor we should have much less of the marasmus which forms so large a part of out-patient practice at children's hospitals. Dr. Money rightly regards the plan of preventing the clotting of the caseine of cow's milk by the addition of large quantities of alkali, as lime-water, to be unscientific, and much prefers the mechanical effect of barley-water and other glutinous substances.

With regard to points about which there is still more or less conflict of opinion, we may observe that Dr. Goodhart considers that there is a membranous laryngitis which is not diphtheritic, basing his opinion rather on the authority of others than on his own observation and arguments, which, indeed, support the other view. It is somewhat remarkable that while a membranous pharyngitis is almost always regarded as diphtheritic, even though no asthenic symptoms should be present, a difference of perhaps less than an inch in the position of the false membrane is sufficient to change the opinion as to the nature of the disease. Dr. Goodhart considers that diphtheria is at first essentially a local disease of the fauces, and that the constitutional symptoms are due to absorption of the poison from the local focus. He accordingly recommends forcible detachment of the membrane whenever it forms, and thorough local treatment by solvents and disinfectants. Dr. Money, though generally agreeing in Dr. Goodhart's views as to the pathology of the disease, disapproves of forcible detachment and solvents. If the views of the latter writer should be generally adopted, the practitioner and the attendants will have a difficult task to perform, and the little patients a terrible amount of suffering to go through, not only from terror, but also from severe pain, as these diphtheritic throats are often extremely sensitive. It must, however, be remembered that by whatever channels the diphtheritic poison finds entrance, by the time the false membranes have appeared there is always already a general infection of the system, and that the patient's danger, unless the larynx be affected, is not due to a layer of false membrane on the mucous surfaces. Moreover, although it is quite right to disinfect the membrane by local applications as far as it can be done without causing serious distress, it is a very doubtful proceeding to exhaust the patient's strength by a battle every two hours; indeed, to carry out the treatment with any real efficiency, still more frequent applications should be made. Neither of the authors notices the great relief which is given by cocaine where swallowing is very painful; sometimes, indeed, this will enable a child, who had previously resisted all attempts to give food, to swallow with comparative ease. With regard to laryngeal diphtheria, Dr. Money recommends early tracheotomy; Dr. Goodhart thinks the operation should be delayed as long as possible. We certainly should be disposed to agree with the former. When once it is evident that false membrane is present in the larynx of a child, nothing is gained by delay. In the treatment of empyema Dr. Goodhart objects to the method, now so common, of excising a piece of rib as a matter of course; and both authors are opposed to the practice of washing out the chest. Dr. Eustace Smith, on the contrary, recommends washing out the chest daily if any fetor be present. We are disposed to agree with the first two authors in regarding the persistence of fetor as an indication that the opening is insufficient.

Dr. Goodhart regards the acute febrile form of infantile paralysis as due to a general inflammation of the spinal cord, which rapidly subsides, leaving here and there patches which have been shattered by the storm. Other cases he considers with Dr. Buzzard to be due to a peripheral neuritis, and analogous to Bell's palsy of the face. He considers chorea to be a functional cerebral disease and not caused by embolism. Dr. Money regards it in the same way, and ascribes it to scattered discharges of nerve energy usually proceeding from the cortical motor centres, probably the result of defective nutrition of the nerve cells. Dr. Goodhart rightly attaches great importance to rest in bed, and ascribes the improvement which so often follows admission into a hospital to this cause.

A hypercritical reader might object to a few expressions or statements in both works, of trifling importance, but which in books intended especially for students it would be better to avoid. Thus Dr. Money uses the word "teichopsia" (p. 416) in such a manner as might well lead an unwary student who was ignorant of Greek to suppose it meant coloured vision. Again, by a printer's error, we find *tâche* cérébrale, which means something very different from what is intended. Dr. Goodhart adopts the barbarous form "leukæmia" instead of leuchæmia. At page 540 Dr. Money gives the incubation period of German measles as about a week; Dr. Goodhart, more correctly, as a fortnight or more. Dr. Goodhart only mentions generally that the glands in the neck are commonly enlarged in this disease, but does not describe their situation—a point of great importance in the diagnosis. Dr. Money rightly mentions the post-cervical glands, but neither author describes the most characteristic of all—namely, the gland over the mastoid process. Surely it is a libel on so innocent an organism as the bacterium termo to ascribe to it, as Dr. Goodhart does, the infection of diphtheria.

Dr. Eustace Smith's book is the second edition of a work well and favourably known to the profession. The chief alterations are in the chapters on croupous pneumonia, pleurisy, and tuberculosis. Of especial interest are the chapters on catarrhal pneumonia and fibroid induration of the lung, which are, however, practically unaltered; and perhaps in the present state of our knowledge as to the pathology of tubercle it might be objected that many of the cases described as catarrhal pneumonia and fibroid phthisis were really chronic forms of tuberculosis. The author describes catarrhal pneumonia as resulting in caseous deposits, which may themselves soften down or give rise to secondary tuberculosis; but it is now generally recognised that if a caseous deposit causes tuberculosis it must itself be tubercular, and most pathologists would regard a caseous deposit in the lung which softened down and caused ulceration as almost certain to be tubercular in its nature. The absence of any examination for the tubercle bacillus necessarily leaves the nature of many of Dr. Smith's cases doubtful; for whatever view may be taken as to the causal relation between the bacillus and tubercle, it is impossible now to doubt that it is a constant element in tubercle, and its presence or absence decisive as to the nature of the process. Although in some few points the pathology of parts of Dr. Smith's work appears to us a little behind the time, this does not detract from its great clinical interest and value, and it may be confidently recommended to the profession as well worth perusal.

Hay Fever and Paroxysmal Sneezing; their Etiology and Treatment. With an Appendix on Rose Cold. By MORELL MACKENZIE, M.D. Lond., Consulting Physician to the Throat Hospital, and late Physician to the London Hospital. Fourth Edition. J. and A. Churchill. 1887.

DR. MORELL MACKENZIE very opportunely publishes a fourth edition of his book on Hay Fever, which must be regarded as one of the most complete expositions of our knowledge of this curious complaint in our language, and which indeed has found translators in other languages. It is not a little surprising that so busy a practitioner should

have found time to go so fully into the literature of this subject as Dr. Mackenzie has done. But it is not a case in which literature takes the place of experience, for both are *en évidence* in this book. The author shows, what is now indeed practically conceded on all hands, that hay fever depends in most cases essentially on pollen—though the particular pollen which gives rise to the disease in one case may not be the cause in another. Nor, indeed, is pollen always to blame. The late Dr. Flint had a peculiar exemption from all forms of asthma save when he slept in a strange bed, where the bed or pillows were of feathers; this was especially the case in inns and steamboats. In other persons the attacks are brought on by emanations from animals—as the horse, the rabbit, the cat, &c. But the hay fever class of cases is much the more numerous; indeed, so much so as to make them a special care to medical men. Dr. Mackenzie alleges that treatment is very useful, apart even from removal from the pollen-laden atmosphere, which is certainly the best course to advise. We must refer our readers for particulars to the book itself, but in the main he relies on soothing treatment locally, such as the application of cocaine, and on constitutional treatment which recognises the neurotic element in cases, especially the exhibition of the valerianate of zinc. In some instances, where there is hypertrophied tissue, more active local treatment is required, but the author does not regard coarse local disease as essential to hay fever, but rather as exceptional.

COLONIAL AND INTERNATIONAL CONGRESS ON INEBRIETY.

THE first Colonial and International Congress ever held on Inebriety and the Special Treatment and Legislation needed for the Diseased Inebriate took place at the Westminster Town-hall on the 6th inst., under the auspices of the Society for the Study of Inebriety.

The opening address was delivered by the President, Dr. Norman Kerr, who, after welcoming the members of the Congress, defined the disease of inebriety as a disease of the nervous system, allied to insanity, and characterised by an almost overpowering impulse to, or crave for, the oblivion of narcotism—a true intoxication mania, or, as he preferred to call it, narcomania. The disease assumed varied forms—periodic, constant, social, solitary. The form might be determined by complicating disease; thus there is the inebriety of insanity, of syphilis, of sunstroke, and of injury. The form might also correspond to the inebriant used—alcoholmania, opiomania, morphinomania, chloralomania, etheromania, chlorodynomania, and chloroformomania. Causes were predisposing and exciting. The chief predisposing causes were heredity, injudicious diet, bad hygienic conditions, sex, age, religion, climate, race, education, pecuniary circumstances, occupation, mental relations, temperament, &c. Of exciting causes some kind of nerve shock was the chief; others were accidents, disease, idleness and overwork, functional derangement, &c. The indications for sound treatment were (1) the unconditional withdrawal of the poison, immediate or gradual, according to its nature; (2) the removal, if possible, of the exciting cause; and (3) the reparation of the physical damage wrought by inebriety, the remedying of the pre-inebriate morbid condition and the strengthening of the moral control. After a warm tribute to American work for the inebriate, the president concluded by impressing on each member of the Congress the imperative duty of patience, of being content to inculcate a knowledge of the truth that many inebriates were diseased individuals and required medical and legal treatment in accordance with justice, and of hopefully looking forward to a future time, whether they lived to see it or not, when the truth would be acknowledged by the Church and by the State, and full justice would be done to the physical infirmities of the weakest and poorest of inebriates. Dr. Norman Kerr then left the chair, which was taken by the chairman of the morning sitting, Dr. Cameron, M.P., who briefly reviewed the law as regards inebriety and eulogised the work of the Dalrymple Home at Rickmansworth.

Dr. Norman Kerr laid before the Congress the result of a special inquiry into our colonial legislative provision for the victims of inebriety.

Dr. T. D. Crothers, in a paper entitled Inebriety and Inebriate Hospitals in America, reviewed the progress of the temperance movement in that country, the condition of the hospitals for inebriates and the work done by them, and the conditions of legal control of inebriates. He said that the history of the inebriate asylum movement in America was a repetition of every real advance in science, passing through three regular stages of growth—agitation, opposition, acceptance. It was now in the first and second stages. All investigation sustains the conviction that the time is not far distant when the inebriate will be taken from his home and on the street, and be quarantined in special hospitals, the same as if suffering from an infectious disease.

Chevalier Max Proskowetz de Proskowmarstorff stated that in Austria inebriety was increasing everywhere on a dangerous scale. The consumption of alcohol (taken as at 100 per cent.) was 6·7 litres a head in a population of 39,000,000; but in some districts 15½ litres was the average. In all Austro-Hungary there was an increase of nearly 4,000,000 florins in the cost for alcohol in 1884-85 over 1883-84. In 1885 there were 195,665 different places where liquors were sold. The national Parliament has been asked to establish homes for inebriates, and to cause the intoxicating nature of alcohol to be taught in schools.

Dr. N. S. Davis said that the conflict between the vice view and the disease view of inebriety was the result of a misapprehension of terms. A drinking parent begets a child with a degenerated type of organisation, rendering the latter liable to inebriety, as to convulsions or imbecility. Inebriety is a disease, inasmuch as it is a departure from health, persisting in certain cases after the immediate act of drunkenness is over.

Mr. Clark Bell, president of the Medico-Legal Society of New York, read a paper on the relation of Intemperance to Insanity. After reviewing the opinions of the most celebrated alienists of Europe, he said that we might safely assume that science recognises throughout the world the abuse of alcohol, not only as the greatest and most direful cause of insanity known to the race, but alcoholism in its various forms as a distinct type of insanity.

Dr. Lewis D. Mason, discussing the relation of disease to alcoholic inebriety, said that apart from those who take alcohol for social reasons, a large proportion take to it because they are diseased—first, as a stimulant cardiac primarily, then on the cerebral circulation; secondly, as an anæsthetic in painful or distressing diseases or conditions. Thus disease may be in a certain proportion of cases the underlying cause of the alcoholic inebriety, and alcohol by degeneration may produce disease which when established may produce and keep up habits of inebriety.

Rev. J. W. Horley read a paper based on his experience while chaplain of Her Majesty's prison, Clerkenwell.

Dr. Petithan, Liège, said that alcoholism in Belgium had augmented with frightful rapidity, and called for immediate and thorough action.

Mr. Axel Dickson said that in Sweden there were two asylums for inebriates. One is at Bic, under medical superintendence, where the charges can be paid only by persons of the middle class; the other is for working people at Törnas, the charges varying from £11 to £22 per annum.

Dr. Richardson explained the action of the heart and circulation in the inebriate classes by sphygmographic tracings, and demonstrated that there was a deviation from health in every stage of inebriety.

Surgeon-Major R. Pringle, M.D., read a paper on Homicidal and Suicidal Inebriety, Dr. Alfred Carpenter on the Meeting Place of Vice and Disease in the Inebriate, and Dr. Edward C. Mann, Brooklyn, U.S.A., on the Pathology of Inebriety.

Dr. Moeller stated that in Belgium they were agitating for interdiction of the inebriate, and for his seclusion in a special asylum for the treatment of his disease.

Dr. Joseph Parrish said that from 500 cases he had come to the conclusion that the majority were at the outset of the disease the subjects either of disease or accident, and had a tendency to periodical outbreaks.

In the evening a dinner, at which 250 guests were present, was held in the large hall.

THE LANCET.

LONDON: SATURDAY, JULY 9, 1887.

THE holiday season is almost upon us. By common consent that large section of the population who have come to regard an annual holiday as the best means of mental refreshment and physical recuperation elect to take that holiday in the months of July, August, or September. This custom is capable of obvious explanation, and possesses certain definite advantages. Probably the desire to escape from the hot and dusty town to bracing coast and breezy heath originated the practice, and the growing popularity of sea-bathing, which can be enjoyed to greatest advantage at this season, has helped to stereotype and perpetuate it. Our social system is so complex that the habits of one class speedily react upon those of all the rest, and so it has come about that as summer wanes into autumn our vast social machinery begins to move a little more slowly, and many are able to enjoy some respite from the monotony of daily routine.

There are those who say that the usual autumnal holiday is a strategic error in the battle of health, and urge that, instead of leaving the shores of Britain when her gardens and meadows, her coasts and her mountains, are at their fairest, we should rather choose mid-winter or early spring as a time at which to escape from frost, and fog, and rain, to the sunny winter skies of southern lands. This argument is worth the attention of those who are free to choose their own time for their holiday, and can take distant flights to Algeria, Egypt, Madeira, or Teneriffe; but obviously this is an altogether exceptional class, and for the great majority of holiday seekers the prevailing custom rests upon a rational foundation. It is in summer and early autumn that the one short breathing space in the labour of the year can be turned to the most beneficial and pleasurable account without the necessity of undertaking distant and expensive journeys. It is not every holiday seeker who has

> "All the world before him where to choose."

For the overwhelming majority the choice is limited to some easily accessible locality within the bounds of the British islands, and there can be no doubt that in such cases the months of July, August, and September offer the maximum of advantage. There are some who, feeling the heavy stress of the winter's work, make a practice of taking a short spring holiday, and frequently take advantage of the interval at Easter for the purpose. No objection need be taken to this custom on the part of those who are simply overworked, but medical experience tends to show that a spring holiday is not without its special perils for those who are or have recently been seriously ill. The weather is apt to be then more than usually capricious. It is the east wind period, when too frequently the bright skies tempt to indiscretions which are speedily punished by the keen air and cutting blast. Travelling facilities are less ample than at a later period, and many of our health resorts are only beginning to awake from their winter torpor. On the whole, spring holidays must be recommended with caution, and in many cases the invalid, at any rate, will be better advised to remain in the enjoyment of the comforts of home until he can travel with greater security.

After the *when* of holidays, the next question is naturally the *where*. In the present article we shall confine ourselves to the needs of the family or the individual in whose case change of air is sought merely as an agreeable mode of rest and recuperation, reserving special cases for subsequent consideration. We may distinguish at the outset two classes of holiday: (1) the holiday which consists of a continuous and more or less prolonged residence at some single spot, and (2) the holiday tour, whether confined within the limits of the British islands or embracing a wider area. The therapeutic uses of these two types of holiday are worthy of some distinction. The former is evidently more suitable, as a general rule, for the extremes of life, for those who are much debilitated or recently convalescent, and for those persons who wish to carry out some special line of treatment at a selected sanatorium. The holiday tour, on the other hand, evidently affords more novelty, amusement, and instruction, and may be recommended to those who are fairly robust or whose ailments are "nervous" rather than organic. The great defect of the holiday tour is that, as a rule, too much is attempted in the way of sight-seeing. There is an excess of continuous fatigue, and not uncommonly health is injured rather than benefited. The tour with a crowd is open to grave objection, and should be positively prohibited to all whose main object in travelling is the restoration of physical vigour, impaired by over-work or disease. It is less within our province to point out the defects of this form of tour from the æsthetic point of view, but the spectacle of the average *bourgeois* tourist, introduced by easy arrangements to the wonders of the Louvre or the Vatican, irresistibly suggests the well-known saying about the impolicy of casting pearls before unsympathetic quadrupeds.

For continuous residence we have the choice of sea, mountain, and inland plain. Where the needs and tastes of children have to be considered, the first-named is rightly regarded as in general the most suitable. Children, with rare exceptions, love the seaside; the waves, the sandy beach, the seaweed, and the marine animals are to them a source of continuous delight. This joy in the ocean is the natural outcome of the physical benefit which usually accrues to the child by a residence at the seaside—a benefit which is very general, and specially marked in those who have any inherited or acquired tendency towards rickets, struma, or consumption. While seaside life is almost invariably beneficial to children, it does not necessarily follow that a bath in the sea shall be included in the daily programme. It is an admirable tonic to those who have a fairly sound constitution, and especially a vigorous circulation, but in all cases of delicacy it should be used with caution. Little harm will be done if the cardinal rule be kept in view that the sea bath does good when there is a speedy and sufficient reaction, but mischief if the reaction be imperfect or long delayed. It is also a safe rule not to insist upon bathing children who regard the process with lively aversion or alarm.

We have in this country a splendid array of admirable marine resorts—Brighton, Eastbourne, Folkestone, Margate, Cromer, Scarborough, Skegness, Whitby, Ilfracombe, Tenby, Barmouth, Llandudno, Douglas, Bray, Portrush. Such are a few of the many which might be mentioned with commendation. Their physiological action may be recollected by the general law that the northern and eastern coasts are bracing the southern and western coasts more or less relaxing. Scarborough and Cromer are two of the most bracing English marine resorts, while Ilfracombe represents the opposite pole.

Of mountain resorts, in the strict sense of the term the British islands are almost wholly destitute, but such agreeable spots as Pitlochry in Perthshire and Llanberis in Carnarvonshire, although at only a slight elevation, afford the active pedestrian ample facilities for scaling heights where the desired air of the mountains may be obtained. The mountain resorts of the continent of Europe are numerous and famous. The Alps, the Pyrenees, the mountains of Auvergne, all contain delightful spots of world-wide renown, where a charming holiday may be spent amidst some of the most sublime scenes in nature.

In agreeable resorts of the third class—namely, inland resorts other than mountains—our own country is rich. Malvern, Cheltenham, Tunbridge Wells, Buxton, Matlock, Ilkley, Harrogate, Leamington, Woodhall Spa, Bath, Moffat, Crieff, and Strathpeffer form a goodly list, which might easily be increased. It will be remarked that many of the places on this list owe their celebrity in some measure to the possession of mineral springs, the revival of popularity of the British spas being no longer a hope only, but an accomplished fact. Bath is already reaping the reward of the active public spirit of her municipality, and Leamington is following so worthy an example. It cannot be doubted that the great popularity of the foreign spas is in many cases due more to their energy and ingenuity in catering for the wants and amusements of their patrons than to any decided natural superiority over similar resorts in Great Britain.

The holiday tour remains for consideration. Here the choice is limited only by time, cost, and individual taste. The Scotch highlands, the English lakes, and the wilds of Connemara afford ample scope for pleasant and health-giving tours, to which the only serious drawback is the extreme uncertainty of the weather in this changeable climate. It is matter for regret that the tourist so commonly insists upon getting over a good deal of ground, and is hence obliged to keep to the beaten tracks, where the facilities for locomotion are in full operation. Pedestrian tours of ten or fifteen miles daily offer far superior attractions for the stout walker to the stereotyped journey by rail, coach, or steamboat. To such persons may be commended the dales of Yorkshire, the green lanes of Warwickshire, the valleys of Wicklow, or the incomparable coast scenery of Devonshire, Cornwall, Antrim, and Donegal. The pedestrian, unless thoroughly inured to his work, must not exceed fifteen miles daily; he must guard against foot-soreness, and abstain from alcohol during active exertion.

For those who desire more distant flights Norway, Switzerland, the Rhine, the Tyrol, the Pyrenees, &c., offer unlimited scope and endless variety. It is a good rule in planning the itinerary of a tour to estimate carefully the time required to accomplish the contemplated round, and then to add one-third of that time in addition for rest, recuperation, and casual delays. In our next article we shall deal with the Invalid's Holiday.

THE wide publicity which was given to the outbreak of diphtheria which prevailed at Ealing in January last will be remembered. As the result of numerous representations, Mr. W. H. POWER was instructed by the Local Government Board to make inquiry into it, and his report, which is now before us, deserves careful attention from several points of view.[1] At an early stage of the disease Mr. PATTEN, the local medical officer of health, was of opinion that the diphtheria was in some way connected with the use of milk from a particular dairy, but neither he nor Dr. CORFIELD was able to detect the means by which this was brought about, whether as regards the sanitary state of the dairy or the health of the cows. The dairy owner, on the other hand, was able to show many points which went to raise doubt as to this view, and the case was admittedly one surrounded by many difficulties, for it involved investigation of a very limited but fatal outburst amongst consumers of over 1000 quarts of milk daily, the supply coming, in part, from other sources than the main dairy farm. On Mr. POWER'S commencing his investigation, circulars asking for information under a number of headings were issued throughout the district, and by the aid of such answers as were sent in it was found that households served by the suspected dairy had suffered to twenty times the extent of households having a different milk service, and so far as a "sore-throat" outbreak was concerned, this appears almost entirely to have been produced after the cause of the diphtheria had come to an end, but even then it was mainly amongst the customers of the dairy in question. The actual diphtheria outbreak was limited to seven days—i.e., Jan. 19th to 25th—and of those then attacked every one of the deaths occurred in persons consuming the milk under suspicion. It was also ascertained that antecedently to this outbreak of diphtheria there was some insignificant prevalence of sore-throat, most abundant amongst customers of the particular dairy, but not affecting them exclusively. Whilst the diphtheria was in progress sore-throat also prevailed, and this, too, amongst the same class of the population; and then, after an abrupt cessation of the diphtheria, came another sore-throat prevalence. The precise meaning of these various occurrences is discussed in detail by Mr. POWER.

At the same time Mr. POWER makes no secret of the imperfect results he obtained during the course of his inquiry. The Ealing case was a peculiar one. An intelligent officer of health was available, and the views which he held at the onset as to the cause of the disease have been confirmed; but notwithstanding this, "panic," Mr. POWER says, seized on the population, and they clamoured in the public press and elsewhere for an "independent" inquiry. There probably never was a case in which it was more necessary to get accurately at all the facts, negative as well as positive; and it may be stated at once that, so far as the implicated

[1] Mr. W. H. Power's Report on an Outbreak of Diphtheria in Ealing. London: Eyre and Spottiswoode. Edinburgh: Adam and Charles Black. Dublin: Hodges, Figgis, and Co.

dairyman was concerned, every information was absolutely placed at Mr. POWER'S disposal. But out of nineteen medical practitioners personally urged by the Ealing Sanitary Authority to give information, it is stated that not more than eleven supplied facts of the sort asked for, eight sending either no reply at all, or refusing the names and addresses of their patients; and some of the private residents also refused information. Under these circumstances, Mr. POWER, after having at great labour put together a large number of extremely interesting facts, is obliged to conclude his report by stating that "questions further arising have not admitted of study on the present occasion, and consequently an opportunity has been lost of getting knowledge on this difficult subject." The aid which the Medical Department of the Local Government Board are able to give to communities affected with epidemic disease is necessarily limited by the small staff at their disposal, and by the necessity for doing such work as they undertake in a complete and exhaustive fashion. It seems, therefore, regrettable that they should not be furnished with the fullest possible information.

FATIGUE seems a simple word with a clear meaning, but how dark are the physiology and pathology of the subject is borne witness to by the elaborate researches of which it has been the centre, and the incompleteness of the solution of even its elementary problems. A thorough understanding of "fatigue" would include accurate knowledge not only of a physiological, but of a physical, chemical, and even psychological kind. Then, again, its influence as a means of treatment of disease or its effects on the already deranged organism is of interest to every medical practitioner. The most important branch of the question, however, relates to the nervous and muscular systems. In the process of getting fatigued, long before exhaustion sets in, what special parts of the neuro-muscular apparatus first become *hors de combat?* Many observers have endeavoured to elucidate this vital element of the question. Some of the latest consider the weakest link to be the peripheral apparatus, and the best researches at least support such an opinion. In his very interesting papers on Writers' Cramp and Allied Affections, contributed to the Royal Medical and Chirurgical Transactions, Dr. G. V. POORE has brought forward many facts connected with the living human body tending to support the hypothesis which locates the mischief in such cases in the peripheral apparatus. The experimental evidence adduced by Dr. AUGUSTUS WALLER is confirmatory of such a view, and, besides, is of a highly suggestive character. It is difficult to assign adequate reasons for the notion, but *a priori* we should expect that the points of junction of any apparatus would prove the weakest parts thereof. And so it apparently is in the neuro-muscular apparatus. The weakness appears to exist neither in the nerve cell of the motor cortex, nor perhaps even in the motor cell of the spinal cord, nor further down in the muscle itself, but rather in the junction between the pyramidal fibres and the motor cell of the cord and the similar place (the motor end-plate) in the muscle. An analogy between these two sites has been clearly drawn by Dr. GOWERS, who pertinently suggests that some agencies—disease as well as drugs—may paralyse the terminations of the pyramidal tracts in a similar way that curare, and perhaps other agents or agencies, destroy the function of the motor end-plate.

Another important point to be decided before we can be fairly considered to have any real knowledge of the nature of fatigue is the causation of the nutrition of these terminal organs—the actual conditions on which they depend for their existence as functional elements. All the information at present at our command would seem to show that the periphery is at the mercy of the centres; that the central motor cells can live and have their being without the aid of the terminal ramifications. And the evidence appears altogether opposed to the belief that any "mutual tension" exists between centre and periphery, though such a belief is entertained by Dr. BROADBENT and others. Easy as the matter seems of experimental demonstration, a further consideration clearly shows the vast difficulties in the way of settling even the simplest points in the problem. Dr. WALLER thinks there is evidence of a trustworthy character tending to prove that the nerve trunk lasts longer than the motor end-plate; that repeated stimulation of the latter causes its functional death before the disappearance of the function of excitability of the nerve. In the nature of things, a definite proof of this problem could only be ascertained by the employment of delicate instruments of research, whose indications, though accurate so far as they go, are yet liable to errors of interpretation. A deflection of the needle may be significant of the passage of a genuine impulse along the nerve which forms part of the circuit—the true negative variation; but accidental currents may cause confusion, and the phenomena attending the electrotonic state are not amongst the most simple in physiology. If matters are no better advanced in the sphere of neurology, what shall we say when we turn to the process of fatigue in other organs? Nor are the pathological manifestations sufficiently understood, a fact of which we are reminded by the work of ANGELO MOSSO, of Turin. He states that fatigue carried beyond the moderate stage, at which it is decidedly beneficial, subjects the blood to a decomposing process through the infiltration into it of substances which act as poisons—substances which, when injected into the circulation of healthy animals, induce malaise and all the signs of excessive exhaustion. That the chief cause of fatigue is the production of certain products and their action on the tissues is not a self-evident proposition, because it seems to be clear that any tissue excited unduly in a given space of time must become exhausted. And it is equally possible that fatigue as a sensation may be caused by the negative condition of diminished reconstruction as by the positive one of actual irritation by the products of metabolism. The facts at present ascertained would seem to prove that the negative and the positive states are both operative in the causation of fatigue.

THE 30th of June, 1887, "the day appointed" by their Lordships of the Privy Council under the Medical Act of 1886 and for certain purposes contemplated in that Act, is now past, and we may profitably devote an article to the consideration of the Act as a whole, and to the bearing of it on the future of the profession in the United Kingdom and its dependencies.

Perhaps the provision of the Act on which its promoters

and admirers would most pride themselves is that which defines a Qualifying Examination for the future to mean an examination in *Medicine*, *Surgery*, and *Midwifery*. Hitherto *Midwifery* has been left out in the cold very much. In a court of law, for purposes of recovering charges for obstetric services, a midwife of the old order has been almost in as strong a position as an eminent obstetric physician, and even a little stronger, inasmuch as she was not hindered as he is by the bye-laws of his College from taking legal measures to enforce the payment of fees. Henceforth, in law, Midwifery is recognised as an indispensable part of medical education, without a knowledge of which no person shall be put on the Medical Register. Not only so, there must be also proof of knowledge of both Medicine and Surgery. Hitherto bodies were excused in law if they examined a man in one-half only of his profession—in Medicine or Surgery; now they must examine in all three subjects mentioned above. Of course this is as it should be. But the credit to the Act is not so great as it seems; for, as a matter of fact, nearly all the authorities have for some time been examining in all three subjects, though technically they, with one exception, conferred a diploma only in regard to one—Medicine or Surgery. The gainers will be chiefly the medical authorities and corporations, who will have a sort of excuse for charging a double set of fees for what is practically one examination, capable of being conducted by one body, which double set of fees will be of very unequal amount in different divisions of the kingdom, and in England and Ireland a very heavy charge for what is after all a minimum qualification to practise. The Act practically makes every corporation *per se* unable to give a complete and legal qualification, and so requires their conjunction or the appointment of assistant examiners by the Medical Council. In the former case both the conjoining corporations expect to be indemnified against loss of fees, and the luckless candidate will have in future to pay, as we have said, two Bodies for what could easily have been done by one. It remains to be seen whether the great disparity of fees charged by the corporations still left to compete with each other will operate injuriously on London schools or to the disadvantage of the public. We should have admired this much-praised feature of the Act if it had achieved a complete examination with more justice to the student and more security of moderation and equality of terms in the different divisions of the kingdom. It will be interesting to see if the conjunction and co-operation imposed on Corporations, which have hitherto cultivated the notion that a physician and a surgeon are essentially different and incompatible beings, will have any effect in widening the culture and the charity of each.

Another great feature of the Act of 1886 is the creation of Inspectors to secure the maintenance of the standard of proficiency in candidates at the said qualifying examinations. Three such inspectors, men of high character and fitness, have been already elected. Such a small number can scarcely do full justice to the work; but they will do their best; and if they give us a fair report on the Final Examinations, to which their present attention is to be restricted, they may well justify their existence. They will best do so by perfect frankness and independence. They come into office when the attention of the profession is directed to the disastrous rejections in practical subjects. They will perhaps tell us the explanation. The gift of a new lease to the Apothecaries' Societies is a feature of the Act which has already been fully discussed. The next change effected by the Act was a change in the constitution of the Council. Not only is there given for the first time a Direct Representation to the profession, but for the first time also a direct and independent representation to every Medical Authority. The half-representation of the Scotch universities has been removed; but they have no more voice in the Council than the Apothecaries of Dublin or the Faculty of Glasgow. We are not ungrateful for small mercies, but it would be absurd to affect satisfaction with so large a Council in which twenty bodies are so minutely and individually represented.

The recognition of Foreign and Colonial degrees by a nation which expects its own diplomas to be recognised everywhere was inevitable, and, if care be taken, need not injure either the public or the profession. The last, but by no means the least, feature of the Bill is the free importation of the Privy Council into the settlement of many questions affecting medical education and examination. Reports of inspectors of examinations are to be forwarded by the Medical Council to the Privy Council. And "if at any time it shall appear to the Privy Council" that the General Council is not doing its duty or maintaining a sufficient standard in the qualifying examinations, the Privy Council may notify their opinion to the Medical Council; and if the Medical Council fail to comply with any directions of the Privy Council, the Privy Council may supersede the Medical Council.

Such is the Act under which, "for better, for worse," the profession is to be regulated in the immediate future. It is badly drawn, and open to much criticism. But if the medical authorities which it recognises or creates do their duty in an unselfish way, perhaps the result may be better and juster than may have been anticipated.

Annotations.

"Ne quid nimis."

PROJECTED CHANGES AT THE COLLEGE OF SURGEONS.

SOME important changes, both in the College itself and in its *personnel*, were decided on at the last meeting of the Council. Among the latter we notice with pleasure that a pathological curator is to be appointed, whose whole time and service shall be devoted to his duties at the College. This is so wise a determination, and so obviously in the interests not of the museum only, but also in the interests of pathological anatomy, that it will be received with acclamation by the whole profession. The Council have done well to determine that this officer shall give his whole time, and shall not practise. We should be glad to know that he will be required to give lectures on surgical pathology, so as to keep the profession well posted in the latest interpretation of pathological facts. It would, perhaps, be too much to expect another series of lectures, such as those delivered by Sir James Paget many years ago and since published; they may nevertheless serve as a model towards which to aspire, and may help the future incumbent of the new office to shape both his

work and his ways. Another duty, of hardly less importance, if we may venture to say so, should be the weeding out of old useless specimens. If this were done thoroughly, we are convinced that there would be little need at present to enlarge the museum. Hitherto, too much attention has been devoted to the acquirement of gross specimens; there are scores of tumours of different sizes and shapes which have no sort of value for a museum, and which, without the clinical history, are quite void of interest as well as of instruction. More attention should be given to the minute structure of such growths, and to the preservation of carefully made microscopic preparations. Acting on the recommendation of the Committee on the Extension of the College Premises, the Council have definitely determined to pull down the two houses immediately adjoining the College, the one to permit of an extension of the library, the other to serve as a residence for the conservator, after being suitably rebuilt. As regards the enlargement of the library, we quite feel that this may be a necessary step; and if it can be adequately accomplished "at an approximate cost of £2500," no very valid argument against the proposal can be made. As regards the rebuilding of No. 38, Lincoln's-inn-fields, "now occupied as chambers on annual tenancies," there is greater room for doubt. For besides the outlay on rebuilding, there will be the annual loss of rents. Then it is somewhat questionable whether the conservator need actually live on the premises. Many conservators would prefer to live out a little more in the country, and thus some valuable property would be at the disposal of the Council. We sincerely trust that these structural changes will satisfy the yearning for extension which seems to have overtaken the Council contemporaneously with the realisation of Sir Erasmus Wilson's great legacy. There are many other and far more important uses to which this money might be put, and these have been signified to the Council over and over again from many different sides—time alone will show with what result.

THE RELATIVE RANK OF ARMY MEDICAL OFFICERS.

IN the discussion which has taken place on the subject of the rank of army medical officers, nothing has struck us as being so remarkable as a suggestion offered by a contemporary as a "healing measure" by which the authorities might give evidence of their real desire to give satisfaction to the Army Medical Service. The suggestion is, "Let them restore this warrant [of 1858] in its integrity, and let future War Ministers set their faces firmly against all insidious attempts on the part of those who have more regard for their own class privileges and prejudices than for the best interests of the public service." Now let us examine what the practical results to the army medical officers would be of the restoration "in its integrity" of this Warrant. It would restore to them the duty of sitting as members of mixed boards, and as president when they happened to be the senior officer, instead of being, as at present, exempted from serving on such boards in any capacity; and it would also revive the extinct grade of assistant-surgeon. In exchange for these boons, if boons they can be called, it would deprive them of the right to retire with a gratuity at various periods under twenty years' service, of the right to retire on pension after twenty instead of twenty-five years' service; it would reduce the army rank of every grade of medical officer except surgeons-major under twenty years' service; it would lower the pay and retired pay of every grade, and would check the course of promotion by the return to the age of sixty-five years as the period at which medical officers of the administrative grades must retire instead of sixty years as at present, and by the abolition of the grade of brigade surgeons. That such a measure, if demanded by the department, might be acceptable to "Mr. Secretary Stanhope and his advisers" is possible, because it would carry with it a considerable money saving; but that it should be asked for by the department, or accepted by them as "a healing measure," is utterly beyond our belief. That the Warrant of 1858 was an acceptable measure, that it did much good, and was fully appreciated by the department, are well-known and undeniable facts; but since that date great and important changes have taken place in the army, and valuable concessions have been made to the demands of the profession on behalf of their brethren in the Military Service. Is it possible that an Act cancelling all these concessions and reverting to a state of affairs which was deemed satisfactory nineteen years ago would prove acceptable or "give satisfaction to the Army Medical Service"?

THE TREATMENT OF LUPUS BY INJECTIONS OF CORROSIVE SUBLIMATE.

DR. IGINIO TANSINI, of Lodi (*Gazzeta degli Ospedali*, June 12th), narrates the treatment of a case of lupus of the nose and face by means of repeated injections of corrosive sublimate. He began with a weak solution: corrosive sublimate 50 centigrammes, distilled water 100 grammes. This produced no reaction of any kind. A stronger solution—corrosive sublimate 1 gramme, distilled water 100 grammes—was then used. This produced some tumefaction and œdema in the neighbourhood of the punctures, and slight suppuration in some of them. Some fourteen or fifteen injections of a few drops were practised. Improvement soon became marked, and eventually all traces of the disease disappeared, the only marks left being those of the punctures in which suppuration had taken place. Dr. Tansini was led to try these injections by the following considerations:—1. That lupus is a form of tubercle. 2. That the bacilli are few and have no tendency to diffuse themselves. 3. That corrosive sublimate has proved certainly destructive to bacilli. He claims advantages for this method on account of lessened pain and disturbance and superior cosmetic results.

SUDDEN DEATHS.

SUDDEN deaths are almost necessarily frequent at times when the conditions of life change suddenly, or are especially changeful. It matters little to the result whether the change effected be for the better or for the worse, relatively. Thus it may be more favourable to the needs of a particular life that the temperature should be high than that it should be low, yet the change from cold to heat may be so rapidly effected as to throw upon the circulatory and transpiratory functions a strain which those parts of the organism which are concerned in the performance of the work required are unable to bear. In this way it happens that persons with unsound or weak hearts, or weak arteries, die suddenly when the temperature rises rapidly, although, if only there were no special strain consequent on the change, it would in itself prove advantageous to them. The converse is true, and without going into details which it is needless to particularise, it may be laid down as a proposition which cannot be disputed that at periods of seasonal change, and at times when the weather is so changeful as to produce great and rapid variations of temperature and pressure, sudden deaths are especially—we may even say *naturally*—likely to occur, and must, as a rule, be numerous. It cannot, therefore, be held to be surprising that the record of events of this class has been a heavy one during the past few weeks. The deductions to be drawn from the facts of the subject are—first, that a very

large proportion of these calamities must be regarded as distinctly avoidable; and, second, in a considerable number of instances the difficulty of avoiding death would have been extremely small. In truth, it is little short of madness for persons who know themselves to be organically unfit, or weakly, to take exceptionally violent exercise—for example, in the cricket field—before the organism has had time to adapt itself to conditions which have been quickly changed. We are not now speaking of persons with recognised heart disease, who, of course, ought not to indulge in arduous sports at all. Our remarks are intended to apply to the cases of persons who, not being "diseased," are scarcely in robust health. It is strange that persons who escape for a few hours or days the monotony of a sedentary occupation generally set themselves, without preparation of any kind, to perform feats of muscular exercise which would severely tax the strength of those who are habituated to this sort of work. It seems to be forgotten that to suddenly change the mode of exertion is practically to call upon parts of the organism which are more than likely to be out of order and incapable of performing the task required of them, whether it be walking, climbing, playing games of muscular activity, or even exposure to more than an accustomed amount of excitement of any description. It is unwise—because unsafe—to assume that the brain or body generally will be able to do what is asked of it without preparation. It is for the most part out of small errors of self-management that great disasters to health and life are developed. It ought, therefore, to be remembered and impressed on holiday-makers of all classes that no unaccustomed exertion of any sort should be attempted without such care and preparation as a common-sense view of the matter suggests and enjoins.

HEALTHY HOUSES FOR THE LABOURING CLASSES.

THE proper accommodation of artisans and their families in town or country is an object still so far from attainment that almost every new suggestion relating to it is possessed of interest. The future of the country as a working and prospering unit is far more nearly connected with the healthy vigour of its native labouring population than with its natural products or its reserve of capital; and as strong muscular power cannot be reared in crowded homes planted in an unwholesome atmosphere, it behoves us to find for it those healthy surroundings which are so indispensable. In London and other great towns the work of providing suitable house room is fortunately making some progress. Much, however, remains to be done, and there is a good deal to be said for the contention of Lord Henry Bruce that this is a matter in which private enterprise, to be efficient, must be largely assisted by the various local authorities. He speaks, indeed, with special reference to London, but his remarks might be applied with more or less fitness to the case of any of our large towns. His complaint is that the Metropolitan Board of Works, while it has condemned many areas as insanitary, has remodelled very few; while, on the other hand, it has not forgotten the more attractive part of its functions, but has, perhaps, done it more than justice by opening up new streets and showy thoroughfares. It must be said in defence of the Board that its duties are manifold, and require a reasonable time as well as method for their execution. We must remember, also, that the demolition of slums is a gradual process, and implies a simultaneous provision of house accommodation for their occupants. Still, the fact that many thousands of families in the metropolis inhabit only one room ought to prove that there is need for increased activity; and it will not fail, we hope, to exert its full effect upon the mind of the Board and of the public. In rural districts a good deal has been made of the compulsory allotment of land to agricultural labourers. The project, if economically practicable, has certainly this in its favour—that it will help to stem that influx of the country population into towns which threatens, if continued, to drain the former of much of its best working material, while the close life of the towns must tell somewhat against the health of the in-comers. A modification of this system has lately been suggested by Dr. Downes at a meeting of the Essex Chamber of Agriculture with a view to improving the sanitary state of labourers' cottages. He proposes that rural sanitary authorities should be empowered to compel the sale of vacant land to cottage owners to be apportioned so that every such dwelling shall have attached to it a garden-plot of about one-eighth of an acre. The particular advantage claimed for this plan is that it will allow of more efficient removal of sewage than is now possible in the case of those small houses where underground drains are not used. The facilities for tillage, the greater supply of fresh air per house, and the consequent advantage with a view to isolation in case of infectious disease, are other reasons why the proposed arrangement, if it can be got to work, should prove satisfactory. The chief obstacle is the financial difficulty of securing to the purchasing owner a due return in rent for his outlay. We have not space to enter into this question, but it is so far satisfactory to know that the scheme is considered a practical one by the Essex Chamber of Agriculture.

TOMMASI-CRUDELI ON MALARIA.

THE last addition to the already voluminous bibliography of this subject is the elaborate "note" recently submitted by Dr. Tommasi-Crudeli to the Royal Academy of the Lincei, entitled, "Stato attuale delle nostre Conoscenze sulle Natura della Malaria e sulla Bonifica dei Passi Malarici" ("On the present State of our Knowledge as to the Nature of Malaria, and as to the Reclamation of Malarious Countries"). The paper is a reply to the author's many critics, and his fair and courteous tone is quite as remarkable as the trenchant force of his dialectic. Without entering into the arguments with which he seeks to remove objections, or to add confirmation to his position, we may admit that he has shown reasonable cause for adhering to the conclusions set forth in his now well-known treatise on the "Climate of Rome," reviewed in THE LANCET of October last. Even as a working theory of the origin of malaria and its remedy, it is not too much to say that his doctrine still holds the field, while he can claim the independent investigations of pathologists like Mosso of Turin as yet further reinforcing that doctrine. The concluding section of his paper refers to the treatment—the prophylaxis, rather—to be adopted in malarious countries, and he still holds to his belief in the preventive utility of arsenic, as "augmenting the mean resistance of the human organism to the invasion of the malarious ferment." Often enough he confesses this end is not obtained because in many cases the "specific resistance" has already sunk below the "mean resistance," either through defective or deleterious alimentation, or through long-continued depression, moral as well as vital, or through previous malarious attacks. Dr. Ricchi, medical supervisor of the South Italian Railways, and now of the Adriatic network, has, at the instance of Tommasi-Crudeli, set himself for some time to obviate these adverse conditions; and to aid the preventive virtue of the arsenic, he has prepared an ailment which has been found materially to answer that end. It consists of a powder, impalpable, soluble in water, in coffee, in broth, and such-like, prepared with the "sterilised" and desiccated blood of calves, and now known to commerce under the name of "Trefusia." The composition, quite accessible to the very poor, "has served," says Tommasi-Crudeli, "to render resistant to malaria those whose organisms, already deteriorated, were

not susceptible of protection by the arsenical treatment alone." He further reiterates his confidence in the decoction of lemon as a prophylactic, and even as a remedy, in cases in which quinine and arsenic have failed. In testimony of this he adduces the experience of Professor Colasanti and of Drs. Taussig and Ferraresi of Rome, and of Dr. Shakspeare of Philadelphia, all of whom have noticed the efficacy of the decoction in every stage of malarious disease.

MORTALITY OF COTTON OPERATIVES IN OLDHAM.

IN an appendix to a valuable report recently issued by Dr. Niven, the medical officer of health for Oldham, on the health of that borough in 1886, the results are published of a preliminary inquiry into the effect of the cotton industry upon the health of the population in that town, more especially as regards the mortality from acute diseases of the respiratory organs and from phthisis. The inquiry is unfortunately beset with as much statistical difficulty as it is full of interest. Dr. Niven has attempted to gauge the influence of this occupation upon the mortality from the above-mentioned diseases by comparing the proportion between the deaths from these diseases among the total population of the town aged between fifteen and sixty years, with the proportion of such deaths at the same ages among persons engaged in the cotton industry. The conclusion at which Dr. Niven arrives, after what he holds to be ample allowance for possible sources of error in the application of his method, is that "the cotton operatives do not suffer more from phthisis than the general population, and that they suffer decidedly less from bronchitis and pneumonia." It will be eminently satisfactory if this somewhat surprising conclusion can be established as entirely trustworthy, but it is necessary to point out one or two obvious defects in Dr. Niven's method, which he will probably be one of the first to admit. In the first place, we find it difficult to see how, if Dr. Niven wishes to ascertain the effect of occupation in the cotton industry upon health, his object can be furthered by embracing in his inquiry the mortality statistics of the husbands, wives, sons, and daughters of cotton operatives. This might be desirable if the inquiry were one into class mortality instead of occupational mortality. Moreover, this extension of the inquiry considerably adds to its statistical difficulty, as the Census Report gives no clue to the numbers of persons *dependent upon* the cotton industry. The Census Report for 1881, however, states that 28,949 males and females were in that year actually engaged in "cotton, cotton goods manufacture," and Dr. Niven estimates the number engaged in the trade at 35,000 in 1886. Another source of difficulty inseparable from Dr. Niven's method is that of age distribution, which must differ very widely in the cotton industry from that in the general population. The partial correction for this disturbing influence by omitting all under fifteen and all over sixty is quite inadequate for the purpose, as the age distribution between fifteen and sixty must differ widely enough to render the conclusions of Dr. Niven of somewhat doubtful value. It should be borne in mind that the result of Dr. Ogle's investigations into the subject of the comparative mortality of males aged from twenty-five to sixty-five engaged in different industries during the three years 1880-82 differs considerably from that arrived at by Dr. Niven. Among men engaged in the cotton and linen manufacture in Lancashire, Dr. Ogle gives for phthisis a mortality figure of 272, against 220 for all males; while the relative figures for diseases of the respiratory system are 271 for the cotton industry and 182 for all males. It is needless to say that Dr. Ogle's figures are more in accordance with the general impression of the effects of cotton factory labour on health than are those of Dr. Niven. We shall look forward with interest to further investigation of the subject by Dr. Niven and other medical officers of health in towns where the population is mainly engaged in the cotton industry. It is necessary, however, that the disturbance due to varying age distribution of the populations dealt with should be fully and carefully guarded against.

OVER-PRESSURE AND TYPHOID.

M. PETER made a distinct contribution to the pathology of over-pressure in the striking paper he read on the 28th ult. before the Académie de Médecine. Having drawn a trenchant distinction between *sur-ménage volontaire* and *sur-ménage involontaire*, and reviewed the various injuries to which the developing school-boy is liable under the severe competitive ordeal to which he is nowadays subjected, he showed that the *courbature cérébrale*—the analogue of the *courbature musculaire*—may have fever not only as its sequela, but almost as its concomitant. Febrile disturbance, most frequent in the summer months, because at that season examinations and competitions are in full blast, may attain in the *surmené* to actual typhoid; for not only is there in these special cases a general rise of temperature, the thermometer often indicating as much as 39° and 40° C., but there are, as M. Peter has had occasion to remark, epistaxes and diarrhœas—symptoms which disappear with the cessation of the *sur-ménage*. This fever is well known, he says, in convents, where the ladies superior have learned to enjoin immediate relaxation of brain tension as the only remedy. M. Peter has noted cases in which one member of a young family, living under precisely the same conditions with the others, drinking the same water, eating the same food, and breathing the same air, has yet had to be treated by him for typhoid, the predisposing cause in the case being the long-continued pressure of preparatory study, a systemic nidus being thus developed, in which the *microbe pathogène* finds everything ready for its evolution. Many of his data have been drawn from the École Polytechnique, where he shows that, even more commonly than fever, phthisis is induced by the high-pressure life the pupils lead under conditions unfavourable to the renewal of healthy tissue. Having shown the unrelieved strain these young minds are subjected to, in view of the test examination, he dwells also on the muscular inaction, the rebreathed air, the constrained posture, and, last of all, the inadequate alimentation which is their portion: "At 6 A.M. a little black coffee and bread, and the first 'square meal' at 2 P.M.; in other words, seven hours' severe head work on an empty stomach. And the second meal does not take place until 9 P.M.—just," adds M. Peter, "when they are going to bed." It is difficult in these circumstances to resist his conclusions that the *lycées* and *écoles* of France are in urgent need of reform.

A PLEA FOR OUR HORSES.

THE sufferings of horses in the streets of London during the summer months cannot fail to excite feelings of compassion in the mind of every humane person. The increased strain upon them, from the slippery state of the asphalte and wood pavements, the state of thirst arising from the heat to which they are exposed and the sweating consequent on their exertions, are all factors which might, by judicious arrangements, be considerably modified. But there is yet another subject which cannot fail to excite feelings of indignation—the brutal cruelty of many of the drivers, who appear to make up for their own feelings of discomfort by lashing their horses and striking or kicking them when, through exhaustion, they are unable to do what their drivers consider a satisfactory amount of work. The interference of humane passers-by rarely leads to any satisfactory result, and they can hardly be expected to take all

the trouble and give up the time necessary to have the offenders punished. But we think it is a point on which Sir Charles Warren might do good service by issuing orders to the police to take out summonses in all cases in which they see cruel treatment inflicted. We would also suggest to the owners of draught horses the duty of seeing that either the bearing rein be abolished, or that at least it be so used as not to be an instrument of torture, which it too often is in the hands of coachmen in the fashionable quarters of London.

ARSENICAL WALL PAPERS.

IT is well to give a note of warning that, in spite of utterances to the contrary, many of the gaudy-coloured wall papers are contaminated with arsenic to a not inconsiderable extent. It has been known that certain shades of green are made with arsenical pigments, and that "flock" papers with a rough surface are peculiarly dangerous from the liability of the flock to be rubbed off and disseminated as a fine dust in the air. This is so generally and so well understood that there can be but little sale for papers of the "green flock" type. An arsenical pigment is one in which the element arsenic enters definitely into the composition of the coloured compound. The green compounds of arsenic and copper and the yellow and red sulphides of arsenic are true arsenical pigments, and as such are especially dangerous. The danger is not limited to these gaudy colours, and it is well to be aware that arsenic acid is used in the preparation of many pigments which are not properly "arsenical." In these it is used as an oxidising agent, and is often imperfectly removed from the manufactured article. Arsenic acid is used largely in the preparation of "aniline pigments," and is often present in these pigments "as an impurity" caused by carelessness in manufacture; but whether arsenic be present by carelessness or intention is a matter which signifies little to the sufferer. It is well to remember that the colour of the paper is no guide to its being contaminated with arsenic. It is liable nowadays to be found in papers of all shades and tints. The pigment known as "fuchsine" is stated by Hoffman and Ludwig to be very commonly contaminated by arsenic, and they assert that of six specimens bought by them only one was found free from arsenic. In the same way the colour known as "magenta" is very liable to contain arsenic owing to the very free use of arsenic acid as an oxidising agent in the process of manufacture. In short, arsenic is so useful in the Arts in the production of pigments other than those which are essentially "arsenical," that the greatest caution is necessary before employing any coloured paper for decorative purposes. Happily the detection of arsenic is not difficult, and may be effected by persons possessing an elementary knowledge of chemistry. As a preliminary test, perhaps that known as Reinsch's test is most convenient. This consists in boiling portions of the suspected paper with distilled water, to which a fourth part of strong and pure hydrochloric acid has been added, and into which a slip of bright copper foil has been introduced. If arsenic be present, a greyish film will be deposited on the copper. This is not conclusive as to arsenic, as some other metals will also cause a film to be deposited on copper under these circumstances. As a confirmatory test Marsh's apparatus may be used. Hydrogen is generated by acting on *pure* zinc with *pure* distilled water and pure sulphuric acid. To the mixture is added a decoction of the suspected paper made by boiling with pure hydrochloric acid. If arsenic be present, arseniuretted hydrogen will be formed, which burns with a bluish-white flame and deposits a film of arsenic on a cold porcelain surface introduced into the flame. Certain confirmatory tests would be necessary to be sure that the deposit is not due to antimony. Antimony, however, is not a common impurity of pigments, and we shall not be wrong in advising that any wall papers which, when treated as we have directed, give a film on porcelain, should be at once discarded. If a wall paper which is already *in situ* be found to contain arsenic, it should be removed, or, if this be not practicable, it should be sized and doubly varnished, and the varnish should be renewed every year or so.

FEVER HOSPITAL ACCOMMODATION.

DR. TATHAM, medical officer of health for Salford, has presented to his authority an excellent report upon the hospital requirements of their district. Not infrequently sanitary authorities, in their desire to avoid expenditure, provide hospitals on sites which are insufficient when the increase of population necessitates the extension of the building. Dr. Tatham has properly pointed out that a site of ten acres of land should be procured, in a situation reasonably accessible to the bulk of the working classes, and has discussed in detail the manner in which this site should be utilised, and the character of the buildings which should be erected upon it. In instructing Dr. Tatham to lay before them a full account of the hospital which is required the sanitary authority have shown much wisdom, and in adopting his recommendations they will be able to congratulate themselves in being free from the risk to which some other authorities are exposed, of having to abandon the site when the growth of the town has rendered it insufficient for their purpose. It would be well if all sanitary authorities had the foresight of that of Salford. The planning and arrangement, and the details of construction, so far as they relate to health, are described in the report, and much judgment shown in the recommendations which are embodied in it. Salford will, doubtless, desire to possess an institution having all the advantages which the best medical knowledge shows to be necessary, and Dr. Tatham's paper will render them important service in this direction.

QUARANTINE IN THE RED SEA.

DR. ABBATE PASHA, the delegate of the Egyptian Government to the International Sanitary Conference of Rome, has just issued a paper on the "Neutralisation Quarantenaire" of the Suez Canal. Abbate Pasha's arrival in Rome seems to have been timed to prevent his doing anything more than present a memorial, which was never discussed, in which he maintained that the English proposal to allow of the passage of the Suez Canal without prior quarantine detention was the only reasonable solution of the difficulty, and he explained how this should be done by allowing the passage of vessels "in quarantine"—that is, without communication with the shores of the canal. In this respect his views were far in advance of those held by the majority of European delegates, and they were diametrically opposed to those of his Turkish colleague. His late arrival, which he naïvely explains as due to *raisons de force majeure*, was, under such circumstances, not altogether free from ambiguity; but not having had an opportunity of setting forth his views in detail at the Conference, he has done so in his present report. He strongly maintains that the present quarantine restrictions in the Red Sea are not only illusory, but ridiculous, and, as indeed must be generally admitted, in no way protective of the health of Europe. In some detail he sets out the administrative changes necessary to give effect to his views, and he proceeds to point out the advantages of allowing all vessels properly equipped from a sanitary point of view to pass the canal whatever illness may be on board, communication being sent to the ports of arrival, so that all needed measures of precaution may be at once prepared and set in motion. Far better, he

says, to leave all doors thus open, than to close the entrance to the canal and go through a series of fantastic and useless performances which abound in cruelty to those who, whether sick or healthy, are, under the quarantine laws, set down in the deserts of Arabia. Dr. Abbate deserves the thanks of intelligent sanitarians for having thus publicly expressed views, the value of which is the greater on account of his long personal experience of the *tracasseries absurdes* now performed off Suez.

PUBLIC HEALTH IN AMERICA.

IN the address on State Medicine delivered before the American Medical Association, Dr. Rohé of Baltimore gave a summary of the progress that had been made in the knowledge of the means for preventing disease, and urged that the watchwords of the practical sanitarian of the future must be: "The compulsory notification of infectious diseases, the prompt and effective isolation of the sick and infected, and the thorough disinfection of all infected articles and sources of infection." He attributed to these three factors mainly the good results which had been obtained in many parts of America, leading to a reduction in Michigan of the number of deaths from scarlet fever of 338 per year. In Memphis, moreover, the general death-rate had fallen from 35 to 23·8 per 1000 of population, and in Chicago from 25·7 to 19·5 per 1000. In America, where the adoption of new thought is easier than in older countries, it may be anticipated that this progress will encourage all parts of that great continent to adopt similar means for the prevention of disease, and that the old methods of quarantine which Dr. Rohé condemns will give place to a more rational system. America evidently requires as active sanitary administration as other countries, and particularly with regard to food supplies, the results of analysis during one year in Massachusetts and New York showing that of the more common articles of food more than half the samples examined were adulterated, whereas the analysis of drugs gave results which were no better.

DIPHTHERITIC CONJUNCTIVITIS IN A YOUNG INFANT.

DR. COPPEZ of Brussels mentions in *La Clinique* a case to which he was called in consultation where an infant of nineteen days old had been suddenly attacked with true diphtheritic inflammation in both eyes—a circumstance extremely rare, even if not actually unique, as Dr. Coppez seems to think. He observes that von Graefe and Wecker have both stated that newborn infants are not liable to diphtheritic conjunctivitis, and though there are, he says, 120 cases of purulent conjunctivitis neonatorum annually in Brussels, of which at least a third present diphtheritic complications due for the most part to too zealous applications of caustic remedies, no case of veritable diphtheria has ever before been noted. Dr. Coppez does not at all believe that the pus from a case of purulent ophthalmia can cause purulent, catarrhal, or diphtheritic inflammation indifferently, as held by some authorities, for in all the numerous instances in which he has performed inoculation, as well as in those he has seen where it has been brought about by accident, he has invariably found the resulting inflammation to be purulent like the original affection. In the present case the child was weak and puny, having been brought up on the bottle; it presented, besides, a considerable patch of intertrigo; there was no syphilitic history. It was elicited that two days before the child was taken ill it had been out, and had been in a locality where there were several cases of croup. The eyelids were much swollen, and the skin was of a dark-red, contrasting signally with the rest of the face, which was very pale. It was a matter of considerable difficulty to evert the eyelids, and when this was accomplished the conjunctiva could be seen to be of a yellowish-grey colour dotted over with ecchymoses. There was no discharge at all, the whole surface being indurated and dry. The eyelids were remarkably hot. The treatment adopted was the frequent instillation of lemon-juice and the constant application of lint wetted with iced solution of boracic acid. For two or three days the local as well as general condition of the child gradually grew more alarming, and it became quite impossible to evert the upper eyelid; the corneæ, too, had become dull all over. It was difficult to suggest any more active treatment; leeches were contraindicated by the debilitated condition of the child, calomel by the diarrhœa actually present, and mercurial inunctions by the diseased state of the skin. Locally, slitting up the external canthus and scarifications were thought of, but only to be rejected on account of their very questionable utility in diphtheritic ophthalmia, even in robust subjects of full age. It was decided, however, to add eserine applications to the other treatment. In two days' time, the instructions having been most conscientiously carried out, a manifest improvement had taken place, and in about a week more the child was convalescent, the corneæ being perfectly bright and clear.

THE CHALMERS HOSPITAL, EDINBURGH.

THE directors of the Chalmers Hospital, Edinburgh, have offered the post of honorary physician to the institution to Dr. G. W. Balfour, who has accepted their nomination. He takes office in the room of Dr. Halliday Douglas, who recently resigned the appointment after many years' tenure of the post. Dr. Balfour is vice-president of the Royal College of Physicians of Edinburgh and consulting physician to the Royal Infirmary. His well-known contributions to medical literature and the honourable and leading position he has so long occupied among his professional brethren in Scotland are features that will render his appointment a popular one, while the general public may well be gratified that services so much appreciated while rendered in the Royal Infirmary are again placed within the reach of the sick poor through the medium of another charitable institution.

DRUNKENNESS IN SCOTLAND.

THE *Scottish Leader* is properly concerned at the drunkenness which still exists in Scotland. There are, it is stated, 40,000 persons a year in this part of the United Kingdom brought up on a charge of drunkenness, either as drunk and disorderly, or drunk and incapable—the police classification of such offences. Our contemporary, referring to a return just issued by Hansard, shows that 1213 of these cases occurred between Sunday morning and Monday morning, and 39,103 between Monday morning and the next succeeding Sunday morning. From the much less number of cases occurring on Sunday he infers the efficacy of the legislation which prohibits the sale of drink on Sundays. The grocer's licence still exists, and is the cause of intemperance of an insidious character to a great extent. Still, it is for the press and the pulpit to enlighten communities on this subject. Neither in Scotland nor in England have either of these powers been perfectly free to make effective onslaughts on this vice. Up to very late days, at any rate, there have been men of light and leading in Scotland who could claim membership in clubs where a minimum of ten tumblerfuls had to be drunk at a sitting. What surprise can we feel at vulgar people indulging when such scientific ignorance prevails among the leaders of society? To do the Church of England justice, in all its sections it is doing its share to modify and improve the old and coarse habits of society in this respect. And we

believe the same is true in Scotland. But a deeper faith seems to tarry there, if not in the virtue, at least in the harmlessness, of its own favourite whisky. We are not aware of any medical authority for the belief that Scotch tissues are proof against Scotch drink. And the great authority of Sir Walter Scott himself for moderation is not to be forgotten. It is more than sixty years since he said, "Wine I seldom use when alone, and use instead a little spirit and water. I have of late diminished the quantity, for fear of a weakness inductive to a diabetes, which broke up my father's health, though one of the most temperate men who ever lived."

ANTHRAX.

AT the recent Gloucestershire Quarter Sessions the prevalence of swine fever and anthrax in the county was reported. The first outbreak of anthrax was at Thornbury; and at Poulton, near Fairford, where it had since appeared, it has unfortunately been accompanied by loss of life. A man who skinned the carcase of a bull which had died of anthrax was taken suddenly ill and died. Sir John Dorington, M.P., said that at Thornbury the entrails of one of the animals that died of anthrax were given to half-a-dozen pigs, and they all died. At Poulton ferrets were similarly fed, and they died. He wisely drew attention to the highly contagious nature of the disease, and the liability of infection by persons attending affected animals if they had any cuts or scratches on the hands. In connexion with this subject we learn of a death from woolsorters' disease at Keighley. The case was that of a labourer fifty years of age engaged at Dalton Mills, who was attacked on June 17th and died on the 23rd. In this case a malignant pustule appeared on the neck. The post-mortem examination was made by Dr. Dobie, with Drs. Hime, Rabagliati, and Bell, of Bradford, and they were unanimously of opinion that the case was one of woolsorters' disease. It was given in evidence at the inquest that during the day on which the man was taken ill he had been engaged with five or six others in removing wool from bales of English and Persian wool. No special precautions were taken to prevent infection, but it was pointed out that hitherto Persian wool had not been regarded as dangerous. The firm promised, however, to adopt the Bradford prophylactic regulations in future.

MATERIA MEDICA IN CHINA.

WE have received from Hong-Kong the first number of a book which promises to be of unusual interest—viz., "Notes on Chinese Materia Medica," conducted by Charles Ford, F.L.S., Ho Kai, M.B., and William E. Crow, M.P.S. The authors draw attention to the want of accessible information concerning Chinese drugs, and hope their labours may promote the identification of many of them. They make graceful reference to the work of others in the same direction, and, indeed, intend to stamp the identity of the plants dealt with by affixing the number originally awarded to the Pên ts'ao drugs by the late Daniel Hanbury. The present number deals mainly with gelsemium elegans, a drug which owes its importance to its frequent employment in criminal poisoning, suicidal or homicidal. After a very full description of the plant and its habitat, the root which is used in medicine is dealt with more particularly. It is stated to yield an alkaloid, belonging to the strychnine or tetanus-producing group. This alkaloid is said not to be associated with *gelseminic acid*, and not to bear the action of sulphuric acid at a temperature of 100° C. Although the drug is never used internally, being employed ordinarily only in the treatment of boils, ulcers, ringworm, and leprosy, yet its powerful properties appear to be widely recognised, numerous cases of criminal poisoning having occurred in Hong-Kong within the last few years. In some brief remarks upon a form of strychnos, it is curious to note that the Chinese appear to be unaware of the poisonous action of these seeds. Judged from this first fasciculus, the work promises in its complete form to be an interesting and valuable epitome of Chinese materia medica. The authors express their readiness to send specimens of drugs of doubtful origin to anyone desirous of prosecuting inquiries.

THE WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

IN his recent address as retiring President of the above Society, Dr. F. H. Alderson, after alluding to the satisfactory state of the Society, said that perhaps to the general practitioner the two most important events of the year were the accomplished fact of the direct representation of the profession in the Medical Council, and the inquiry initiated by Sir Andrew Clark as to the best means of providing medical attendance for the sick poor on a provident basis. One important result of direct representation had been to raise the question of limited pupilage, for Dr. Glover moved and carried at the very first meeting of the Council a resolution for a committee to consider the best means of increasing the practical element in medical education. Dr. Alderson attached much importance to this revival of pupilage, in a limited form, as a means of increasing not only practical knowledge, but good medical conduct and respect for the honourable methods of practice. He concluded his address by several suggestions bearing on pupilage, hospitals, the relation of hospitals to general practitioners, and of the latter to consulting and hospital surgeons and physicians. Finally, he urged the establishment of a night medical service for London and other large towns as in Paris.

MIDDLESEX HOSPITAL.

WE are glad to notice that a concert, under the immediate patronage of Her Majesty the Queen and many members of the Royal Family, is to be given on Wednesday next at the Royal Albert Hall in aid of the funds of Middlesex Hospital. The "Golden Legend" will be performed. Sir Arthur Sullivan will conduct his own work, and Madame Albani, Madame Patey, Mr. Edward Lloyd, and Signor Foli will take the principal parts, and will be supported by the choir of the Albert Hall Choral Society. An influential Ladies' Committee has been energetically working for its success, and has already obtained for it much support. We hear that there is a good demand for tickets, and it is to be hoped that a satisfactory balance will be handed over to the treasurers of the hospital.

PATENT MEDICINES.

THE enormous public importance of "patent medicines" can be estimated from the fact that during the financial year which has recently ended a sum of no less than £179,071 was contributed as stamp or label duty. Regarded simply as a measure of public credulity, these figures are sufficiently surprising; but a more serious aspect of the case remains—the question of the morality of the stamp duty. To the ignorant section of the public the stamp is generally supposed to imply some sort of official guarantee of the excellence, or at least the harmlessness, of the preparation so mystically enclosed; the consequence is, as the records of many coroners' inquiries show, that mistakes and misadventures are of frequent occurrence. Considering the great increase in the use of patent medicines, it is surely time that the stamp should be no longer used to cloak many substances which without it could only be dispensed in coloured bottles as poisons, with the usual restrictions regarding

their sale. At present the only real information conveyed by the stamp is the strict compliance with the regulations affecting the sale of proprietary drugs; in other words, it is simply the indication of a commercial speculation, in which the Government goes shares with adventurous advertisers.

ARMY SURGEONS.

IN the House of Commons, on Monday last, Dr. Farquharson asked a question respecting a grievance of the Army Medical Officers to which we have repeatedly called attention—the difference of the system adopted with regard to the dating of the commissions in the Army, Navy, and Indian Medical Services (*vide* THE LANCET, Sept. 18th, Dec. 25th, 1886). It is one of the real grievances of the department; it is obviously unjust that entering the service under exactly the same conditions as regards qualifications and examination, the army medical officers should, during the whole period of their executive service, be junior to those of the Indian and Naval Services, who gained their appointments at the same time, and have certainly no equitable claim to obtain this precedence. We are far from satisfied with the answer given by Mr. Brodrick. Admitting the facts, he said that "whether the army surgeons experience any practical inconvenience from the antedate given to Indian and naval surgeons may be doubted." This is a point upon which the Financial Under-Secretary has no right to be in doubt. He has it in his power to obtain authoritative information from the head of the department, and he is bound in justice to the officers to use every means to remove what is felt and acknowledged to be a very real grievance. Mr. Brodrick gave it as his opinion "that the best way to remove the anomaly would be for the Admiralty and the India Office to follow, in future appointments, the practice of the War Office." This may be an exceedingly convenient way of answering a question, but it does not relieve the War Minister from the duty of seeing that officers are not treated with injustice. What steps have been taken by the War Office to rectify this "anomaly"? Have any suggestions been made to the heads of the other two services on the subject? and with what result? If not, or if they have been made without success, what does the Secretary of State propose to do to obtain just treatment for the army medical officers? We trust that Mr. Stanhope will repudiate the shelter of "doubt" put forward by Mr. Brodrick, and that he will ascertain through the Director-General the actual state of the case, and will adopt efficient measures to remedy a manifest injustice inflicted upon officers of a branch of that service of which he is the responsible head.

THE PUBLIC VACCINATOR FOR CARDIFF.

WE can feel much sympathy for local authorities who are jealous of the health reputation of their town, and who endeavour to maintain this reputation by active sanitary administration. We fail to understand, however, the action of the Vaccination Committee of the Cardiff Board of Guardians, who are reported in a local journal to have recommended that the public vaccinator for Cardiff, Mr. Horder, should be deprived of his office because he has supplied a member of the Town Council with information as to the existence of certain cases of small-pox in that town. Statements, we understand, had recently been made at a meeting of the Health Committee as to the freedom of Cardiff from small-pox, and their accuracy being doubted by some members of the corporation, one of their number sought further information from the public vaccinator. Whatever view the Vaccination Committee may take as to the propriety of the action of this gentleman in communicating to a member of the Corporation knowledge within his possession, we hold very strongly that there should be no secrecy as to the existence of disease. If the guardians adopt the recommendation of their committee, Cardiff will be exposed to the charge of endeavouring to maintain its character for salubrity by methods which will not meet with public approval, and which will, indeed, lead the public to regard with distrust any statements that may be made in the future on this subject. When sanitary administration is effective, and when town authorities are honestly engaged in the duty of preventing disease, a plain statement of facts cannot possibly do injury. We believe, moreover, that were local authorities to publish every week a statistical return of the cases of infectious disease which have occurred during such period, considerable aid would be rendered to the progress of health administration in the country, and they would not suffer by such publicity; they would, indeed, be able to claim that they had nothing to conceal, and would thereby win public confidence. If we understand the Cardiff incident aright, this view is not sufficiently understood in that town, and we shall watch with some interest the action of the Board of Guardians in dealing with the report of their committee. Nothing can be more damaging to a town than that its authorities should be credited with the desire to conceal the existence of disease, yet the story published by a local journal points to this conclusion. Certainly the facts recorded there require explanation.

A CONSUMPTION HOSPITAL FOR EDINBURGH.

WE gather from articles in the *Scotsman* that there is some difference of opinion in Edinburgh as to the best use of a Jubilee Fund, which was to be devoted in one way or another for the benefit of consumptive patients. The writer of the articles pleads strongly for a consumption hospital for Edinburgh similar to those of London. A hospital, however, is but a poor part of the remedy for the misery of consumptive disease. We urgently need legislation to diminish the risk of certain callings which engender the disease, and to improve the homes of the poor, in which it grows as in a hot-bed. We also require a large charitable fund for the good of those threatened with, rather than actually ill of, phthisis. A timely voyage or change of air would do more for such cases than any mere hospital treatment, and is a form of charity that would be worthy of the Jubilee Year of Queen Victoria.

CHOLERA IN ITALY.

IN March last we drew attention to the existence of cholera at Catania, in Sicily. The outbreak was not severe, and at Rome its identity with the Asiatic disease was held in some doubt. From that date to the present time no further cholera intelligence has been received from Italy; but now comes news of a serious outbreak at Rocella on the Calabrian coast, and within a suspiciously easy distance of Sicily. Some panic has ensued, the inhabitants fleeing from the affected locality; and, according to a report dating from Naples on the 3rd inst., seventeen cases and nine deaths had already occurred. The latest news from Rome, however, is to the effect that the Calabrian disease, though of a suspicious character, is not cholera.

MILK SCARLATINA.

THE Royal Agricultural Society have been informed by the Privy Council that the inquiry concerning the infection of milk through an eruptive disease of the cow is now being prosecuted, and it is proposed that it should include all the questions which have been raised in Dr. Klein's reports and papers, and the Society are further told that they might assist by urging farmers to examine their stock frequently, and at once to give notice to the Agricultural Department of the existence of any eruption on the teats or udders of

cows. We are glad to see that the subject is to be dealt with in a comprehensive manner; but probably the Hendon disease will only be able to be identified when further outbreaks of scarlatina due to milk infection have enabled its clinical characters to be better appreciated. When opportunity occurs, it is to be hoped that accurate drawings will be made of the affected udders and circulated amongst farmers. As yet the official reports on Dr. Klein's more recent work as to the relation between the cow disease and human scarlet fever have not been published, but we may anticipate they will appear in the next volume of the report of the Medical Officer of the Local Government Board.

MR. SPURGEON ON THE GROCERS' LICENSING SYSTEM.

MR. SPURGEON is nothing if not severe and sweeping in his denunciation of what he believes to be wrong. We do not sympathise with all his views on matters of social policy, but we believe he is absolutely right about the grocers' licensing system. It is one of the most mischievous of the facilities offered for the growth of the drink vice in this country. Multitudes of otherwise respectable women, in all classes of society, are led to indulge in the pernicious practice of drinking secretly, by the ease with which they can procure spirits and wine and beer while purchasing other household stores at the grocers. A great deal has been done and said with the purpose of inducing the Legislature to abrogate this system of licensing, leaving the sale of intoxicating drinks to the licensed victuallers and wine merchants, from whom what is bought must needs be bought openly; but no argument as yet adduced has been potent enough to counteract influences and to outweigh interests which would be affected by the withdrawal of licences from grocers. Whether further efforts may be successful remains to be seen. We fear they will not.

THE POLLUTION OF THE THAMES.

AT last there is some prospect that the right of local authorities to pollute the Thames will be tested in a court of law. The Staines Local Board have been repeatedly fined for allowing the sewage of their town to enter the river, but no other result has followed. Their action, which has thus been condemned, has been continued without intermission. The Thames conservators have now determined to prosecute the Staines Board, and the grand jury of the county of Middlesex have been summoned to the Lord Chief Justice's Court for this purpose, and have returned a true bill against this Board. These proceedings have not been taken too soon. The dangers to London water drinkers from the pollution of the Thames is a very definite one, and has been frequently insisted upon by ourselves. The issue of the trial which is about to take place will be awaited with some anxiety, for one of two conclusions is obvious—either the condition of the Thames must be improved so as to make it a safe source of supply, or a fresh source must be found.

NOTIFICATION OF INFECTIOUS DISEASES.

IN his annual report on the sanitary condition of Cardiff during 1886, Dr. Paine suggests the adoption of the dual system of notification of infectious diseases. He would make it a compulsory notification on the householder, and leave it as a voluntary one on the part of the medical attendant, who, whenever he notified, should receive a fee for his certificate. Dr. Paine evidently attaches importance to the medical aspect of notification, and he refers especially to the fact that such notification supplies definite information as to the nature of the infectious disease to be dealt with.

THE CROWN PRINCE OF GERMANY.

HIS IMPERIAL HIGHNESS continues to make a steady improvement. We learn from Berlin that the piece last excised by Dr. Morell Mackenzie, and submitted to Professor Virchow, is "shown even more clearly than the one removed by the previous operation to be a hard and composite wart, which had proceeded or grown out of a moderately irritated and thickened surface, while its base has not shown the slightest ground for assuming the existence of a new growth penetrating into the tissue."

THE CAUSE OF PUERPERAL ECLAMPSIA.

IN a recent number of the *American Journal of Obstetrics* (March and April, 1887), Dr. A. F. King enunciates the theory that pressure on the aorta and vena cava inferior, which he believes to be the cause of the renal troubles in pregnancy and labour, are due to the abnormal position of the fœtus in the latter part of pregnancy. This he believes to be normally the "dorso-anterior position of an oblique presentation"—i.e., the head normally lies not in the brim of the pelvis, but in the iliac fossa; in this position the shape of the fœtus is such as to avoid pressure on the great vessels. He does not believe that in primaparæ the head of the child is normally lower at the end of pregnancy than in multiparæ, and attributes its frequent low position to vanity, leading to tight lacing. This pressure on the great vessels leads to pressure in the renal and cerebral arteries, thus accounting for the renal troubles as well as the nervous condition. The paper, which is the result of much thought, fails to convince us, and will probably fail to convince others. It serves to show the unsatisfactory condition of our knowledge on this subject, but, like all thoughtful inquiry, should help, directly or indirectly, to put an end to this ignorance.

PUBLIC SERVANTS AND THE HOT WEATHER.

WE are glad to see that a committee has been formed to raise subscriptions for the purpose of recognising the services of the metropolitan police, "a body of men who, by their steady conduct in the performance of duty, have deserved well of their countrymen," and that it is proposed that such recognition should take the practical form of a seaside convalescent home for the sick and wounded of the police force. It is necessary, however, that those who are in health should also be cared for, and we would suggest to the Commissioner of the Metropolitan Police to follow an excellent example set elsewhere, notably at Brighton, and to allow his constables in this very hot weather to wear white instead of black helmets. It is satisfactory to observe that some of the railway companies now permit their servants to don light comfortable linen jackets in place of their ordinary heavy coats, and that occasionally postmen are to be seen wearing light sun-hats.

A CASE OF TRICHINOSIS IN BRUSSELS.

HITHERTO Belgium has been believed to have been free from trichinosis. A case has, however, recently occurred at the Molenbeek Hospital, and, being reported to the Minister of the Interior, M. Wehenkel was deputed to report on the matter. The patient was a German, and was born in 1811, but had lived in Belgium for many years. He seems never to have complained of rheumatic pains except in 1880, during which year it was remarked that his voice had become altered. He was known to have been very fond of American bacon. The man was admitted into the hospital on the 13th of June with a cyanotic skin, a thready pulse, an inaudible voice, and profuse diarrhœa, from which last he had been suffering for five days. He died the next day. At the necropsy trichinæ were found in all the muscles except

the heart. The cysts had some of them undergone calcareous degeneration; others contained living trichinæ. No trichinæ were discovered in the intestinal canal. M. Wehenkel advised that the body should be destroyed either by incineration or by sulphuric acid. Professor Crocq, whose patient the man was, in an instructive clinical lecture on the subject, which is published in *La Presse Médicale Belge*, gives it as his opinion that the infection was due to American bacon eaten at least seven years before the acute symptoms appeared.

HOSPITAL SATURDAY FUND.

MR. ROBERT FREWER, Secretary to the Hospital Saturday Fund, calls our attention to an error in an annotation on this subject in our issue of the 25th ult. The workshop collection, it appears, does not take place until September, and the street collection for the present year has reached nearly £5000, instead of £145, as was stated by us. We were ourselves somewhat puzzled with the figures which came under our notice, but regarded them as an imperfect and temporary statement. We trust that the true report of Hospital Saturday, 1887, will show an eminently satisfactory result.

CHRONIC RHEUMATISM.

THE manifestations of simple chronic rheumatism are not unfrequently throughout a large part of their course more or less limited to one side of the body, and much capital has been made out of this fact in order to support the theory of the nervous origin of many forms of rheumatism. M. Cazalis is one of those who support this theory; he avers that in these cases pulmonary congestions and chronic bronchitis frequently affect only the lung of the same side of the body, the other lung and bronchi remaining free. The right side of the body enjoys the unenviable distinction of being affected more frequently than the left; and, according to M. Collin, rheumatic pleurisy is most common on the right side. M. Cazalis finds support for his contention in the greater frequency of deformity and deviation outwards of the right great toe in the cases in question; and also in the dextral hemi-laterality of megrim, chorea, and hysteria, due to arthritic causes.

MODERN FASHIONS.

POPPY RED, porcelain blue, royal blue, and mauve are, we are told, to be the favourite tints at French, and therefore at English, watering-places during the coming bathing season. Pink is discarded in favour of heliotrope, although the latter colour fades directly in the sea air, and assumes a dirty-brownish hue. Those who have weak eyes and yet sit much in the open air may remember that neutral and dull tints are less irritating than bright-red and saturated blue. The injurious effect of scarlet on the eye is demonstrated by the discomfort and irritation felt by those who are engaged for many hours daily in making soldiers' clothes. In most instances, however, it is not the light that comes from above that harms—nature has provided us in that respect with quite sufficient protection in the eyelids; but it is the glare that is reflected in bright sunlight from sea and land, as is abundantly shown by snow blindness.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

The deaths of the following foreign medical and scientific men are announced:—M. le Dr. Liouville, Deputy for the Meuse, and *professeur agrégé* of the Paris Medical Faculty, from cardiac disease, at the age of forty-nine.—M. Caytan, one of the oldest and most respected of the medical practitioners of Antwerp.

A GUNSHOT WOUND OF THE CLAVICLE.

DR. MANUEL S. SORIANO has recently brought before the notice of the Mexican Academy of Medicine an interesting specimen in the pathological museum under his charge of an old gunshot wound, where the ball penetrated the substance of the left clavicle and fractured the bone, but ensconced itself behind it, and, with the callus thrown out, forming a perfectly rigid structure, though some deformity remained; the man, however, lived for twenty years, and then merely applied for advice on account of some fistulous openings which had presented themselves. The surgeon who saw him proceeded to resect the bone, but the patient died from septicæmia in a few days' time. At the necropsy the bullet was found embedded in the bone.

LEAD POISONING FROM HOME-MADE WINES.

LAST year Dr. Donald Campbell of Calne brought under notice in an excellent report the fact that lead poisoning in and about Calne was being largely brought about by the use of home-made wines, which during the process of fermentation took up the lead contained in the glaze with which the local earthenware pans were coated. The publicity given to this method by which lead poisoning can be brought about does not appear to have sufficed to stop the manufacture of these wines in pans lined with a glaze containing lead, for, according to the recently issued report on the Upton-on-Severn rural district, Mr. J. S. Cowley finds the same results in progress there, the wine in question being mainly a home-made plum wine.

DYSPEPTIC VISUAL TROUBLES.

SUCH symptoms as tenderness of the globe of the eye brought on by the act of accommodation, associated with vertiginous attacks and intellectual torpor, or with scintillating scotoma, hemiopia, and photopsia, or even polyopia, sometimes supervene after meals, and have been ascribed to auto-intoxication by peptones the result of defective action of the liver; but these symptoms are far more common in neuropathic subjects, and the question must remain unsettled whether the dyspepsia may not be of as neurotic an origin as the other disorders, which are clearly of nervous kind.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—The Veterinary College was on the 29th ult. officially proclaimed by Dr. Lucius, the Minister of Agriculture, to have been raised to the rank of a Hochschule or University. The first rector is Professor Müller.

Brussels.—M. le Prof. Pigeolet has been elected President and M. le Prof. Kufferath Secretary of the Medical Faculty.

Cracow.—Dr. Rudolf Trzebitzky has been recognised as *privat docent* in Surgery.

Innsbruck.—The Professorship of Midwifery, vacant by the translation of Professor Schauta to Prague, has been filled by the appointment of Dr. Emil Ehrendorfer, *privat docent* in Vienna.

Lyons.—M. Albertin has been appointed Prosector for three years.

Montpellier.—A valuable library, together with the sum of 15,000 francs, has just been bequeathed to the Medical School by M. Bouisson, who desires that the monetary legacy shall be employed in erecting a suitable building for the reception of the volumes and for the expenses of printing a catalogue. In addition to all this, M. Bouisson has left 100,000 francs to found five annual prizes to be called by his name.

Munich.—The municipal authorities have promised to grant a site worth £15,000 between Findlingsstrasse and

Krankenhausstrasse for a new surgical clinic as soon as the Government is prepared to build. It is estimated that the cost will amount to more than £30,000.

Poitiers.—M. Buffet-Delmas has been appointed for a period of nine years Supernumerary Professor of Anatomy and Physiology.

Prague.—Two schools for midwives are about to be established. The instruction to be given in German and Bohemian respectively.

Vienna.—Dr. Sigmund Lustgarten has been recognised as *privat docent* in Dermatology.

Würzburg.—July 6th is being celebrated by Prof. Kölliker as the seventieth anniversary of his birth, and as marking the completion of forty years' occupancy of the chair of Anatomy.

THE prizes at St. Mary's Hospital Medical School will be distributed by Sir Edward Sieveking on Thursday, July 21st, at 3 P.M. At the same time it is proposed to present Sir Edward Sieveking with a testimonial (on his retirement as senior physician), to mark the high esteem in which he is held, and in recognition of the great service he has rendered to the hospital and school. Subscriptions to this fund should be sent to the dean.

DR. VINCENZO SCIALPI of Taranto has issued a pamphlet dealing with the symptoms, prognosis, causes, and cure of cholera. Details as to the latter he reserves, desiring to submit them, for the purposes of securing an award, to the Italian Medical and Chirurgical Academy. Dr. Scialpi had experience of cholera both in 1854 and in 1884, but his views as to the causation of the disease are not those current in this country.

DR. ANTHONY COLLING BROWNLESS was on April 30th presented with an illuminated address from the office staff of the University of Melbourne, congratulating him on his accession to the honourable and responsible post of Chancellor of that institution. Dr. Brownless has for seven years acted as Vice-Chancellor.

IT is understood, states the *Daily News*, that the Queen has intimated her intention to confer a baronetcy on the Dublin physicians, Dr. J. T. Banks and Dr. H. H. Head, respectively.

THE governing body of the Bristol Royal Infirmary has resolved to elect, for the first time in the annals of the institution, an obstetric physician.

SEVERAL soldiers at the Curragh camp have during the recent hot weather died from sunstroke.

DR. HENRY GERVIS has resigned his post as Obstetric Physician to St. Thomas's Hospital.

PRESENTATIONS.—H. D. King, M.D., M.A., B.Sc. Edin., of the Limes, Linton, on the occasion of his leaving that town to settle in Sudbury, was presented by his friends and patients in the neighbourhood with an illuminated address and a silver salver, an antique tortoiseshell tea-caddy being at the same time presented to Mrs. King, and a spade guinea to the doctor's son.—Dr. Octavius Jepson has been presented with a handsome marble clock and vases by the officials of the City of London Lunatic Asylum, Stone, Dartford, on the occasion of his resigning the post of medical superintendent, which he has held for the past twenty-three years.

MEDICAL MAGISTRATE.—Mr. Charles J. Jones, M.R.C.S. &c., Tonypandy, has been placed on the Commission of the Peace for the County of Glamorgan.

REPORT
OF
The Lancet Commission
ON THE
POLLUTION OF THE THAMES AT THE HENLEY REGATTA, 1887.

THE Henley Regatta proved this year a brilliant success. The presence of the Prince and Princess of Wales, together with several other members of the Royal Family, helped to attract a highly fashionable throng. The fact that the aquatic carnival followed so closely on the celebration of the Jubilee imparted to the fête an aspect of exceptional rejoicing. Extensive illuminations, both on the shore and on the water, further contributed to attract increasing thousands of visitors. The weather also was remarkably fine—indeed perhaps too fine, for the heat was somewhat overpowering; yet behind all this glitter and gaiety lurked a cruel suspicion that evil consequences might possibly arise. The long-continued drought has made the water of the Thames fall very low. It is therefore more than ever necessary that the reduced volume of water should be kept exceptionally clean. This we had hoped would be done by the enforcement of the new bye-laws rendering it illegal for house boats and steam launches to drain direct into the Thames. It has, however, already been explained that these bye-laws were not gazetted before the Saturday previously to the race. This only allowed the following Monday and Tuesday for the carrying out of the new regulations. Of course nothing was done. Indeed the numerous occupants of the house boats whom we questioned were not even aware that any alteration had been made. So the dangers of last year have had to be encountered again this season. In the present instance the risk is aggravated by the fact that the water is much lower; on the other hand, there is as yet no extensive cholera epidemic in Europe. At the time of the last Henley Regatta, it will be remembered, cholera was very prevalent in Italy, and it was quite possible that some travellers from the south—persons who, for instance, had wintered in Italy and in an incipient stage of the disease—might then have returned to England in order to be present during the regatta. The patients would probably have resorted to one of the closets on a house boat before the true nature of their complaint was ascertained. Thus the choleraic dejections would have been drained into the drinking water used in London. How far the specific germ might have grown and multiplied to a sufficient extent to produce an epidemic in London we are unable to say. The consequences, however, would be so appalling that the risk, if ever so slight, should, at any cost, be avoided. Nevertheless, this has not yet been done.

On the day before the regatta we proceeded to Henley, to investigate the present state of affairs. A great number of house boats and launches had already assembled. On the course we counted sixty-six house boats and thirty-nine steam launches; but there were some more on the other side of the bridge. It was no easy matter to ascertain the condition of the house boats. In several instances the occupiers or owners were absent; in other cases there were so many ladies on board that we were obliged to postpone our questions as to the drainage. Nevertheless, we succeeded in obtaining information on a sufficiently large scale to arrive at a definite conclusion. We found that on four boats there were earth-closets. Two boats had been altered since last year, probably in anticipation of the new laws. The other two boats were newly built, had not been on the water before, and were therefore free from the error of construction of the older craft. On the other hand, we found eighteen house boats with closets on board that drained direct into the water. The occupier of another boat refused to answer our questions, so we may fairly conclude that in this case also the drainage was conducted direct into the water. Thus, of the twenty-three house boats we were able to visit, there were not more

than four that possessed earth-closets. Alteration in view of the new law had only been made in two instances, and in eighteen cases drainage into the Thames was admitted. We may therefore conclude that the great majority of the house boats still drain into the water, and the same may be said of those among the launches that possess closets. Among the boats draining into the Thames must be specially noticed the starting boat. This is an exceptionally large craft. It contains saloons and a large upper deck, entirely covered with chairs, and each seat was let for the modest fee of five shillings. At least a hundred persons must have gone on board this boat; and all had access to the closet that communicated directly with the drinking water of London. That the Thames Conservancy could not apply the new law to all the house boats in the two days it possessed for action we readily admit. But the boat on which the committee meets, and which is moored opposite the winning post, is so much of a public institution that here, at least, an earth-closet could have been introduced within the two days. This boat was the headquarters of the Thames Conservancy officials during the race. From this point they started to clear the race-course; here they returned immediately the race was over. A few words, a little gentle pressure, would have sufficed to remove the scandal, instead of allowing the boat of all others, which was the most seen, the most frequented, to remain, as in times gone by, a source of infection to all London.

The Thames Conservators, acting according to the suggestions we threw out last year, have, however, effected one notable improvement. They have brought down two scavenger boats which go up and down the Henley race-course late in the evening and early in the morning. All the refuse from the house boats and launches, together with the soil from the few earth-closets that exist, are collected by these floating scavengers and brought to shore at Henley. The carts belonging to the Henley Local Board remove the same to a shoot situated about a mile out of the town. While we were at Henley some complaints were made concerning the landing of this refuse, and perhaps a more appropriate and solitary spot might have been selected for this somewhat unpleasant operation. Not a few persons connected with house boats also expressed strong opinions against the earth-closets, a remedy which they qualified as worse than the evil it is sought to cure. This, however, is evidently a partial statement. An earth-closet, if properly managed, would not cause any nuisance whatever; and, even if it does produce some slight unpleasantness, this would only affect the occupants of the house boats, whereas draining into the Thames compromises the interests of all London. No one is obliged to live in a house boat, but several millions of people find it necessary to live in London.

When the races were over we inspected the river, looking carefully between the house boats and the various creeks, where the refuse generally accumulates. The result was eminently satisfactory. Up to Friday evening, in any case, the scavenger boats had done their work well. Certainly there was a great deal of green stuff floating on the surface of the water, but on examination it proved to be, for the most part, the vegetation of the Thames itself broken up by the many boats collected within close compass during the last few days. The proportion of cabbage stumps, salad leaves, and other edible vegetables was very small. There was a formidable array of corks and empty bottles floating and jostling together in commemoration of recent rejoicing; but we failed to detect the offal, the fish-bones, the pieces of bad meat, the stale fruit, the lobster shells, and the dead fish noted last year. Even faded nosegays seem for the most part to have been reserved for the scavenger boats, and were no longer allowed to float down the Thames as melancholy mementos of forgotten gallantry. There were, however, a large number of pieces of bread, perhaps thrown in by beggars, who do not approve of relief given in kind. It is not yet known how much refuse has been removed by the scavenger boats, but to judge from the improved aspect of the river, the quantity must have been considerable.

These are notable improvements, though the worse danger still remains; but we are assured by the Thames Conservators that they will carry into effect the new bye-law suppressing all closets that drain into the river. Let us hope that not a day will be lost in applying the new regulations. Though the house boats are no longer gathered together in such large numbers on one spot, they are still, for the most part, inhabited, and the pollution of the river therefore continues. Further, the scavenger boats will not follow the house boats as they leave Henley. There is nothing to prevent the occupants of the latter from resuming the practice of throwing offal and other refuse into the water, unless it be the knowledge that the new bye-law applies to all offensive matter as well as to sewage. The circular drawn up by the Thames Conservancy to this effect should therefore be distributed without a moment's loss of time to the occupants as well as the owners of the house boats, and a conviction obtained for the very first offence proved. The Thames Conservancy have always protested that they did not create the grievance, that they were most anxious to remove all cause of complaint, if the law would only empower them to act. They now possess the necessary power, and it is to the interest of every inhabitant of London that they should protect the water we drink from daily, hourly contamination. The great majority of house boats and steam launches floating about on the Thames above the intake of the London water supply still drain into the river. The weather is hot; this is the season for epidemic diseases; not a moment must be lost to put an end to the danger we have often denounced, and, we trust, not in vain.

Pharmacology and Therapeutics.

WARNINGS ABOUT THE USE OF ACETANILIDE.

Two articles have recently appeared in the Hungarian medical journal *Gyógyászat*, in which the profession is warned that acetanilide, or antifebrin as it is called, though it is not without value, is an uncertain, and indeed a dangerous, antipyretic. Dr. Géza Dulácska finds, after giving the drug a prolonged trial in the hospital, that small doses may bring down fever, but that in some cases even three-grain doses produce violent sweats, prostration, and hæmorrhage or cyanosis. It does not appear to him to exert any favourable action on the course of the disease itself, being thus inferior to salicin, resorcin, and ichthyol. If given at all in fever, its action requires to be very carefully watched. In certain neuroses, however, Dr. Dulácska has found it very useful, and as the doses required were smaller, he is disposed to recommend its employment in such cases, as it appears to be free from danger. In a case of severe trigeminal neuralgia, in which quinine, gelseminum, and morphia had produced but little improvement, three grains of acetanilide were given night and morning without effect; seven grains and a half were then ordered, divided into ten powders, one to be taken every two hours. This produced a great improvement, and after ten days of this treatment the cure was complete. No unpleasant effects beyond some nocturnal perspiration showed themselves. Two other cases, where severe pain was associated with meningo-myelitis and syphilitic tabes respectively, which had been treated in various ways unsuccessfully, were greatly benefited by acetanilide, no unpleasant effects being produced. Dr. Biro gave acetanilide in eighteen cases of various kinds including typhoid, croupous pneumonia, pleurisy, polyarthritis, tuberculosis, and phthisis, in doses varying from a grain and a half to forty-five grains per diem, and was much struck with the uncertainty of its action, an effect being sometimes produced by a grain and a half, while at others ten or eleven grains had no effect at all. Most of the patients complained of chilliness, while cyanosis and irregularity of pulse occurred in several cases. In one case, where seven grains and a half had been taken, there was a severe rigor followed by cyanosis, sweating, and an irregular, thready pulse, the symptoms being so alarming that recourse was had to brandy and hypodermic injections of ether. In another case, in which acetanilide had been given for eleven days, similar symptoms presented themselves, together with clonic spasm of the lower extremities, reminding one of the symptoms in anilin poisoning. Altogether, Dr. Biro thinks that the evil effects of acetanilide are so great that it cannot be recommended for general adoption.

ANTIPYRIN.

Two Scandinavian physicians have recently written on the use of antipyrin, the apyretic properties of which they unreservedly admit to be the rule. Some exceptions, however, were observed. Thus Dr. Wetterdal of Upsala found in one case a rise of temperature during the first hour after

a thirty-grain dose of more than 1° F. Rigor and collapse never occurred in any of his cases. Copious sweating, however, was observed at times, over which atropine exerted no control. A rash with bluish-red spots on the face, as described by Wising, was also occasionally noticed. In some cases cinchona was advantageously combined with antipyrin. Dr. Laache, who made a special study of the action of antipyrin in phthisis, found that, though as a rule it brought down the hectic very satisfactorily, in one instance it produced, at first at least, a contrary effect, the temperature rising very markedly after a thirty-grain dose. It afterwards fell gradually, reaching a point decidedly below the normal. Simultaneously with the rise a rash appeared, and the patient complained of a burning sensation in the mouth and eyes and along the œsophagus. Curiously enough, the patient had previously taken antipyrin for a longer period without having experienced any unpleasant effects. The sample could not well have contained any poisonous admixture, as other patients took it with impunity.

INGLUVIN.

Dr. Paul Mohr of Cologne, writing in the *Allgemeine Medicinische Central-Zeitung*, mentions some cases in which he found this preparation give good results when all other treatment had failed. In a very troublesome case of tabes mesenterica, in which nourishment of every description was invariably vomited, the very first dose produced a marked effect. About four grains were ordered to be dissolved in liquid nourishment three times a day, and in a few days' time food of various descriptions could be retained without difficulty. In two other cases somewhat larger does—i.e., five grains four times a day—were employed with equal success. One was a case of delirium tremens, and the other one of severe dyspepsia associated with entozoa, the patient being utterly unable to retain the nauseous medicine necessary for the destruction of the worm. By means of ingluvin this condition was remedied, and the entozoon (a tænia solium) got rid of, a complete cure resulting.

NEUTRAL HYDROCHLORATE OF QUININE.

Neutral hydrochlorate of quinine is soluble in its own weight of water, and therefore possesses many advantages over its basic ally, which dissolves in twenty-two times its weight of water. M. Clermont prepares the neutral salt by mixing one equivalent of neutral sulphate of quinine (548 grammes) with two equivalents of dry chloride of barium (208 grammes), after having dissolved them in a sufficient quantity of water; the moisture is then evaporated below 100° C., and the neutral hydrochlorate is left behind. A solution of this ought not to have a caustic taste.

SANTONIN.

The chemical constitution and the physiological action of this anthelmintic have just been made the theme of fresh investigation by Coppola and other Italian pharmacists. Their results have been embodied in three separate papers submitted a month ago to the Accademia dei Lincei, and will shortly appear in the "Atti" of that society. Tommasi-Crudeli contributes a note on these results.

TREATMENT OF TOOTHACHE DUE TO DENTAL CARIES.

Dr. Popoff, writing in the *Russkaya Meditsina*, states that he has succeeded in relieving toothache caused by caries of the teeth by making the patient rinse the mouth every half-hour with a dessertspoonful of a 20 per cent. solution of permanganate of potash, taking care to hold the liquid in the mouth for some minutes.

HEALTH OF THE IMPERIAL JAPANESE NAVY.

THE special reports upon the improvement in the scale of diet in the Japanese navy for the years 1883 and 1884 afford some very interesting information bearing on the influence of diet upon health, and especially upon the prevalence of kakké (*beri-beri*) in that service. From a table in the second report it appears that the deaths, on the average of the six years 1878-83, in a force of 4887, amounted to 17·29 per 1000, and of these 8·39 per 1000 were from kakké. The Director-General of the Medical Service, Takaki Kanehiro, F.R.C.S. Eng., being struck with this high rate as compared with that of European and American navies, instituted an inquiry into the causes of this fatal disease, and came to the conclusion that it depended, in great measure at least, on the quality of the food supplied to the men. A scheme for the improvement of their diet was prepared, and came into operation in 1884. The practical result was an immediate reduction in the general death-rate, which, on the average of the two years 1884-85, was only 7·49. This great decrease was chiefly in the deaths from kakké, which during the first period averaged 8·39, and in the last two years were only 0·64 per 1000. But the beneficial results of the increased and improved scale of diet were not confined to the reduction of the death-rate, they are manifest also in the cases treated. The returns do not give the number of these prior to 1883, but in that year they are stated to have been 3235 per 1000 of the strength; in 1884 they were reduced to 1864, and in 1885 to 992.[1] These ratios somewhat overstate the amount of sickness, as the compiler of the returns has fallen into the error of adding the number on the sick list at the beginning of the year to the cases orginating during the year; but for the purposes of comparison they are sufficiently correct. The mean daily sick per 1000 of strength in 1883 was 121, in 1884 it was 84·5, and in 1885 it was still further reduced to 52·25. From 1878 to 1883 the cases of kakké averaged 324 per 1000 of strength annually, in 1884 they were 137, and in 1885 only 5·9; but even this does not fully represent the gain, for of the 5·9 no less than 4·6 were cases under treatment at the beginning of the year; those occurring during the year, therefore, were only in the proportion of 1·3 per 1000 of strength. The improvement in health, however, as shown by the reduction of cases, was by no means confined to kakké. It was very marked in diseases of the digestive and respiratory systems (the classes giving rise to the highest ratios of cases), and diseases of the eyes were reduced to one-half the previous amount. In 1883 the average daily amount of food issued to the petty officers and seamen was 50·37 oz., of which 25·78 were rice, 9·56 vegetables, 4·85 fish, and 2·18 meat. In 1884 the total amount was increased to 78·38 oz.: the rice to 32·16, vegetables to 12·41, fish to 6·56, and meat to 8·02; and milk and tea were added. In 1885 a further modification took place, the total amount being raised to 85·81 oz.; the rice was reduced to 18·45 oz., 8·85 oz. of wheat and 8·48 oz. of bread being substituted; meat and fish remained nearly the same, but vegetables were increased to 17·89 oz. and the milk was raised to about a pint and a quarter daily, with some modifications in subsidiary articles of the ration. It would be interesting to know whether the army was dieted on the same meagre scale as the navy, and whether the same improvements were introduced into it with similar results. It is very satisfactory to find the medical officers of the Japanese navy devoting so much attention to the health conditions of the men entrusted to their care, and following up the results of their investigations with so much success. It would be a great advantage in these reports if the numbers who died or have been invalided from each class of diseases were given in the tables, instead of merely the ratio per 100 of cases, as it would render the data much more available for purposes of comparison. In the second report—that for 1885—the summary of the report on the health of the English navy has been reprinted from our columns, to serve as a standard of comparison for the Japanese navy.

In the Chinese man-of-war now lying in the Tyne it appears that several cases of kakké occurred during the voyage to England, of which one died in the Red Sea, and another when passing through the Suez Canal. When the ship arrived in the Tyne there were fifteen or sixteen cases on board, of which three were sent to the Newcastle Infirmary, where two of them died, and a third death occurred on board the ship. As the men had a great objection to being sent to the hospital, Dr. Slater was engaged to attend the cases, and so far all have done well. He is stated to have treated them with nourishing diet, and to have protected them from cold. The success which has attended this appears to bear out the views of the Director-General Takaki Kanehiro as to the cause of the disease in the Japanese navy. It would be interesting to get a detailed statement of the dietary on board the *Too Nan* from the time of her leaving China till her arrival in the Tyne.

[1] We find it necessary to call attention to an error in the letterpress of the first report. At page 2 the strength and the number of cases are stated to be for "the 16th year of Meiji" (1883), while the figures quoted are those for the year 1884, as shown in the tables.

HONOUR TO A VETERAN ANATOMIST IN RUSSIA.

ON April 30th, at 11 A.M., the Anatomical Theatre of the Imperial Medico-Chirurgical Academy of St. Petersburg was the scene of a lively and noteworthy gathering of physicians, surgeons, students, and deputies from numerous learned societies, lay and medical, from every part of Russia, to congratulate Professor Wenzel Gruber upon his having held the professorship of practical anatomy for no less a period than twoscore years. During that time Dr. Gruber, besides having instructed, examined, and passed 8000 medical students in practical anatomy, has himself dissected, or superintended the dissection of, upwards of 30,000 bodies. His talents, when Hyrtl's demonstrator in Prague (from 1844 to 1847), having been noticed by the late Prof. Pirogoff, he was invited by the eminent Russian surgeon to St. Petersburg, where he at once received the appointment of Demonstrator of Anatomy at the Imperial Medico-Chirurgical Academy. Gruber, like the late Goodsir of Edinburgh, belongs to a race of students whose sole object in life is the pursuit of their favourite science irrespectively of all difficulties, and to whom worldly pelf presents no attractions. To Gruber the discovery of a new muscle (however insignificant its size), of an anomalous bifurcation of the tiniest arterial twig, of the capricious course of some barely detectable nerve, or of a bursa which had successfully eluded the penetrating eye of former anatomists, afforded more pleasure than would have done the possession of the fattest of the flesh-pots of Egypt. Outspoken and rough at times, Gruber has, however, managed to gain universal respect and love for his honesty, disinterestedness, and kindness of heart. Though apparently indifferent to everything that has not some bearing on anatomy, he is a keen observer of human nature, which he looks at from under thick eyebrows and through large tortoiseshell spectacles. His serious, concentrated look is often lighted up by the pleasantest of smiles, while under an exterior that seems to preclude the idea of a joke or laughter there lurks a fund of dry, at times irrepressible, humour. But to return to the demonstration of which Gruber himself was the subject on April 30th. From various parts of the world there were eighty telegrams sent to the veteran anatomist, while upwards of twenty gorgeously illuminated and bound addresses from different societies congratulated him on the completion of his fortieth year of professorship. A large gold medal, struck in his honour, was presented to him, while a copy of it in silver was struck for and presented to Mrs. Gruber. On one side of the medal are the Christian and family names of Gruber, and below a very good likeness of him; the finely-shaped oval head, the high and full brow, the thick, bushy head of hair, and the rounded and beautifully chiselled chin are admirably portrayed by the sculptor. The reverse of the medal presents, in its centre, the large Roman numerals XL.; below the inscription is 1847—1887; while above is written: "To the teacher of 8000 Russian surgeons." A splendid album, containing upwards of sixty original paintings in oil and water-colours, was presented to him by some of the first artists in Russia. The Emperor created him a Knight of the White Eagle, one of the highest of Russian orders. Indeed, there was no end of telegrams, addresses, memorials, and speeches—all tending to show how deeply respected and beloved Gruber is, alike by colleagues, pupils, and the public in general. So remarkably prolific a writer is Gruber that during forty-three years, the number of his published anatomical memoirs and pamphlets exceeds 540—a proof that the anatomists of a bygone age were generous enough to leave something for their followers to do and discover. Although honoured by the Tsar of Russia, the Minister of War, the Town Council, and literary and artistic societies throughout the country, the embassy of Austria, of which country he is a native and subject, was conspicuous by its absence. Gruber was met and loudly cheered by the young, honest, and lusty voices of hundreds of medical students who waited for him in the corridors of the academy and in the street, and who triumphantly carried him to his home shoulder-high. Gruber thanked them at his door with tears in his eyes, and told them that all he had striven to do during his life was to work and be honest, and if they all did the same he was sure they would succeed in whatever they undertook.

HOSPITAL SUNDAY FUND.

THE following are among the principal amounts received at the Mansion House during the past week on behalf of the Hospital Sunday Fund:—Christ Church, Lancaster-gate, £801 6*s.* 7*d.*; St. Stephen, South Kensington, £193; Portman Chapel, Baker-street, £154; Christ Church, Westminster-road, £57; Eaton Chapel, Eaton-square, £54; St. Alban's, Streatham-park, £67; St. James's, Marylebone, £90; St. Peter's, Vere-street (corrected), £247; St. Gabriel's, Pimlico (corrected), £89; St. Peter's, Eaton-square, £542; St. John's, Wilton-road, £86; Kensington Parish Church, £372; Christ Church, Kensington, £103; St. Stephen's, South Kensington, £193; St. Martin-in-the-Fields, £114; Rosslyn-hill Unitarian Church, Hampstead, £91; Trinity Presbyterian Church, Notting-hill, £62; St. Anne's, Soho, £61; Holy Trinity Chapel of Ease, Wandsworth, £50; St. John the Evangelist, Blackheath, £50; St. James's, Norlands, £63; Holy Trinity, Sydenham (corrected), £123; Wanstead Meeting House, £60; West London Synagogue of British Jews, £232; S. C., £100; St. Mary, Aldermary (corrected), £83; St. John, Paddington, £175; St. Augustine, South Kensington, £85; St. Stephen, Paddington, £100; St. John's-wood Presbyterian Church, £85.

The total amount received on behalf of the fund up to the time of our going to press is rather over £35,000.

VOLUNTEER AMBULANCE INSPECTION.

BY request of the Principal Medical Officer of the Northern Military District, Surgeon Sullivan, M.S., recently made an inspection in camp at Beverley of the bearer company attached to the 2nd Volunteer Battalion, Yorkshire Regiment. The company consisted of fifty non-commissioned officers and men, with three surgeons—viz., Surgeon-Major J. W. Taylor of Scarboro', and Acting Surgeons W. T. Colby of Malton and R. Bruce Low of Helmsley. After a careful inspection of the men, the various movements in stretcher drill were gone through. Twenty-three recruits were then examined in elementary anatomy and surgery, as well as in bandaging and the improved methods of lifting and treating the wounded. The inspection and examination were very thorough, lasting nearly three hours. At its close Surgeon Sullivan spoke highly of the men as to their drill and their knowledge. He said he would send in a very good report, and expressed astonishment at the amount and extent of the proficiency displayed by the bearers.

On Saturday the official inspection of the battalion took place. The inspecting officer, Colonel Barratt, commanding the 19th Regimental District, who has in previous years shown great interest in the ambulance movement, requested the bearers to treat various injuries indicated by himself men from the combatant ranks being supplied for the purpose of illustration. Colonel Barratt questioned the bearers regarding the injuries and their treatment, and afterwards stated that the men fully stood this practical test as to their efficiency. He addressed the bearers, and complimented Surgeon-Major Taylor on the evident proficiency of his men. The bearer company marched past with the battalion at the conclusion of the regimental inspection.

The formation of regimental bearer companies would seem to solve some of the difficulties which many surgeons feel in trying to promote the efficiency of the Volunteer Medical Department. The Volunteer Medical Staff Corps appears to be confined to the large centres of population, and every difficulty seems to be put in the way of getting official recognition. Dr. Taylor's men are all efficient Volunteers as well as bearers. They have passed all their drills, including even musketry. In this way they are doubly efficient, and deserve a double recognition from the military authorities.

PERILS OF SHAVING.—A case of some interest, as suggestive of a danger not generally recognised, has just been heard and decided in the Brighton County Court. A carpenter sued a barber for £5 damages, in consequence of having, as he alleged, contracted a skin disease in the process of undergoing shaving in the shop of the defendant. The decision was in favour of the plaintiff for the amount claimed.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

South Shields Urban District.—In commencing his report in 1886, Dr. Campbell Munro states that the mean death-rate for the borough during the decade which has just closed indicated an annual saving of life amounting to 31 per 10,000 living, as compared with that of the previous decade. During 1886 the death-rate was 20·5 per 1000, and the deaths under one year only amounted to 134 on each 1000 registered births. As regards infectious diseases, the borough isolation hospital did excellent work, no less than 137 cases being admitted, and of these 120 were scarlatina patients. The deaths were only as 1 to every 17·1 cases admitted, a result which is especially satisfactory to Dr. Munro, who has taken upon himself the administrative charge of the institution without remuneration. A considerable part of the year has been devoted to improving the houses of the poor, and Dr. Munro says that the red-tapeism connected with action under McCullagh-Torrens' Acts is such that he will never again resort to them, preferring procedure under Section 97 of the Public Health Act. Satisfactory proceedings were taken in connexion with some Tyne alkali works; and as to milk pollution, such measures as were adopted were aimed, not against retailers, but against the more culpable wholesale dealers, and in every case the action was successful.

Maidstone Urban District.—Mr. M. A. Adams, F.R.C.S., gives the death-rate for the borough as 17·5 per 1000 during 1886. Scarlet fever was somewhat prevalent. Eighty-eight cases came under notice, and of these no less than fifty-eight were received into the new isolation hospital, as to which the report has only praise and satisfaction to record. In like manner 4795 articles were disinfected, this being done free of cost. The need for extending the public water service is shown by the fact that of three samples of well water analysed not one was fit for use, and it is stated that many remain which are highly dangerous. Amongst other improvements effected, we are glad to note the paving of courts and alleys, a proceeding sadly wanted in a vast number of our towns and cities. The year was one without special sanitary incident, but it was marked by steady progress in regard to hygiene.

Marylebone.—Under the name of "Sanitary Chronicles" Mr. Wynter Blyth issues a monthly record of work in this parish, and these supply much of the information which goes to make up the annual record. During 1886 the birth-rate was 25·6, and the death-rate 19·7 per 1000; the mean duration of life for the whole parish being 44·5 years. Considerable improvements as to dwelling accommodation are steadily in progress, artisans' dwellings taking the place of insanitary property. So, also, the leases of great estates are falling in, and this involves extensive repairs or re-erections. Under the Sanitary Acts 2048 orders were issued during the year, and only sixteen owners were summoned for neglect. Amongst tenemented houses, 901 have now been put on the register, and it is believed that but few of the class of houses intended to be dealt with under the law as to houses let in lodgings now remain which are not under control. In 1200 instances extensive improvements in house drainage were effected during the year, and, speaking generally, a large amount of good work was done as the result of nuisance inspection.

Liverpool Urban District.—One of the most satisfactory records contained in Dr. Stopford Taylor's recent annual report is that relating to the mortality from "fever," which since 1866, when typhus was largely prevalent, has fallen with fair annual regularity from 1523 deaths to 198. It is a great pity that the deaths thus tabulated all appear under the meaningless head "fever," except as regards an epidemic of relapsing fever in 1870-72; but this is, perhaps, to some extent, brought about by the terms used in registering deaths. Thus, of the 198 "fever" deaths in 1886, 7 were said to be from gastric fever, 85 from typhoid, 48 from enteric fever, 3 from continued fever, 1 from low fever, 47 from typhus, 3 from fever, and 1 from relapsing fever. As to typhus fever, the disease still clings to Liverpool, and we regret to notice the continued practice of occupying cellar dwellings. Typhus will never be eradicated from Liverpool until much more has been done in improving the dwelling accommodation of the lower classes, and in securing ample means for isolating the disease. The beginning made in the latter direction is excellent in its way, but when we compare Liverpool and its present proposals, and Glasgow with hospital grounds of thirty acres in extent, we have greater hopes for Glasgow in the matter of typhus than we have for Liverpool.

Peterborough Urban District.—Dr. Paley reports that of the cases of enteric fever which were not imported there was a definite local cause ascertainable in nearly every case. Such an experience should lead to increased energy in the matter of inspection, for the value of true sanitary work is mainly shown in the removal of these conditions before, and not after, preventable disease has been brought about. Privy nuisances are especially adverted to, and we have already commented on the question of refuse removal in connexion with the report of the inspector of nuisances. The annual death-rate for 1886 was 17·8 on the population for 1881 and 16·4 on the estimated present population.

Peterborough Rural District.—In this rural area Dr. Paley records a death-rate of 14·5 per 1000, and he strongly endorses the advice given by Mr. Spear of the Local Government Board as to the need for scavenging and refuse removal by the authority themselves in the more populous parts of the district. He says that the question is rather one of organisation than of expense, and only needs the instruction of the authority to carry it into effect.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 6114 births and 3207 deaths were registered during the week ending July 2nd. The annual rate of mortality in these towns, which had steadily declined in the preceding five weeks from 20·4 to 17·6, rose again last week to 18·1. During the thirteen weeks ending on the 2nd inst., the death-rate in these towns averaged 19·8 per 1000, and was 1·4 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 9·4 in [Derby, 12·5 in Portsmouth, 12·5 in Halifax, and 12·9 in Sunderland. The rates in the other towns ranged upwards to 24·6 in Blackburn, 27·9 in Newcastle-upon-Tyne, 28·1 in Preston, and 29·2 in Manchester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 489, 501, and 512 in the preceding three weeks, declined again last week to 486, notwithstanding the greater fatality of diarrhœa; they included 156 from measles, 136 from whooping-cough, 110 from diarrhœa, 38 from scarlet fever, 22 from "fever" (principally enteric), 22 from diphtheria, and only two from small-pox. No death from any of these zymotic diseases was registered during the week in Derby or in Halifax; while they caused the greatest mortality in Manchester, Norwich, Birkenhead, and Newcastle-upon-Tyne. The highest death-rates from measles occurred in Oldham, Huddersfield, Manchester, Norwich, Birkenhead, and Newcastle-upon-Tyne; from whooping-cough in Norwich, Sheffield, Liverpool, Blackburn, and Nottingham; and from scarlet fever in Bristol, Birkenhead, and Blackburn. The 22 deaths from diphtheria in the twenty-eight towns included 13 in London and 2 in Manchester. Small-pox caused two deaths in Cardiff, but not one in Greater London or in any of the twenty-six other large provincial towns. The mortality from diarrhœa somewhat exceeded the average for the season. Only one case of small-pox was under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease, no new case having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding five weeks from 333 to 184, rose again last week to 199, but were 21 below the corrected average. The causes of 65, or 2·1 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Plymouth, Wolverhampton, and Derby. The largest proportions of uncertified deaths were registered in Salford, Sheffield, and Leicester.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·3 and 20·3 per 1000 in the preceding two weeks, declined again to 19·5 in the week ending July 2nd; this rate exceeded by 1·4 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 14·6 and 16·9 in Aberdeen and Edinburgh, to 23·3 in Greenock and 28·2 in Paisley. The 487 deaths in the eight towns last week showed a decrease of 20 from the number in the previous week, and included 43 which were referred to whooping-cough, 18 to diarrhœa, 7 to scarlet fever, 7 to diphtheria, 6 to measles, 3 to "fever" (typhus, enteric, or simple), and one to small-pox; in all, 85 deaths resulted from these principal zymotic diseases, against 90 and 71 in the preceding two weeks. These 85 deaths were equal to an annual rate of 3·4 per 1000, which was 0·7 above the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 48 and 38 in the preceding two weeks, rose again last week to 43, of which 16 occurred in Glasgow, 9 in Edinburgh, 9 in Dundee, and 4 in Greenock. The 18 deaths attributed to diarrhœa, of which 7 were returned in Glasgow and 3 in Dundee, showed an increase upon the numbers in recent weeks, and were 2 above the number in the corresponding week of last year. The 7 fatal cases of scarlet fever showed a further decline from recent weekly numbers; they included 2 in Dundee. Of the 7 deaths from diphtheria, showing an increase upon the low numbers in the previous two weeks, 4 occurred in Glasgow and 2 in Edinburgh. All the 6 fatal cases of measles were returned in Glasgow; and the death from small-pox occurred in Aberdeen. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 109, 76, and 72 in the preceding three weeks, rose again last week to 80, and were 3 above the number returned in the corresponding week of last year. The causes of 85, or more than 17 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 26·7 and 27·6 per 1000 in the preceding two weeks, further rose to 29·4 in the week ending July 2nd. During the thirteen weeks ending on Saturday last the death-rate in the city averaged 28·7 per 1000, the mean rate during the same period being but 18·0 in London and 19·4 in Edinburgh. The 199 deaths in Dublin last week showed a further increase of 12 upon the numbers returned in the preceding two weeks; they included 30 which were referred to measles, 5 to diarrhœa, 3 to whooping-cough, 2 to "fever" (typhus, enteric, or simple), and not one either to small-pox, scarlet fever, or diphtheria. Thus the deaths resulting from these principal zymotic diseases, which had been 32 and 28 in the preceding two weeks, rose last week to 40, and exceeded the number in any previous week of this year; they were equal to an annual rate of 5·9 per 1000, the rates from the same diseases being 2·8 in London and 2·8 in Edinburgh. The fatal cases of measles, which had increased in the preceding eight weeks from 6 to 21, further rose last week to 30, and exceeded the number in any previous week of this year. The deaths from diarrhœa, whooping-cough, and "fever" also showed an increase upon the numbers in the previous week. The deaths of infants had declined, whereas those of elderly persons somewhat exceeded the number in the previous week. Six inquest cases and 5 deaths from violence were registered; and 61, or nearly a third, of the deaths occurred in public institutions. The causes of 24, or more than 12 per cent., of the deaths registered during the week were not certified.

TASMANIAN MORTALITY STATISTICS.

The Government statistician for the colony of Tasmania (Mr. Robert M. Johnston) has recently issued his return of the vital and meteorological statistics for the year 1886. Vital statistics relating to our Australian colonies, especially their mortality statistics, are full of interest for comparison with those of England and Wales. Their interest and value would, however, be far greater if we could be assured of the approximate accuracy of the civil registration of births, deaths, and marriages in our several colonies. Tasmania has the reputation of being one of the healthiest of our healthy Australasian colonies, and the statistics of the return just to hand fully corroborate this impression. This colony, with an area of rather more than 26,000 square miles, had last year an estimated population of only 135,501 persons. The recorded birth-rate of this population was equal to 34·2 per 1000, ranging from 36·8 in the chief urban districts (Hobart Town and Launceston) to 32·7 in the country districts. It may be noted that the birth-rate in the colony steadily increased from 30·2 in 1877 to 35·7 in 1884, since which it has somewhat declined again. It would be useful to know whether these differences may be attributed to varying accuracy of registration or to variations in the proportions of women at the child-bearing ages. The death-rate in the colony in 1886 was so low as 14·6 per 1000, showing a further decline from the rates in recent years. In the absence of official information on the point, it is fair to assume that the registration of deaths in recent years is at any rate fully as accurate as in past years. It is, therefore, very satisfactory to note that while the mean death-rate in the first five years on record (1856-62) was 17·2 per 1000, it did not exceed 15·7 in the last five years (1882-86). The return before us contains a singular defect (probably due to oversight) in its statistics bearing upon the mortality in 1886 in various parts of the colony. The death-rate in the year per 1000 of the mean population is given as 5·30 in Hobart Town, 3·33 in Launceston, and 5·95 in the whole of the country districts, while in the whole colony, as before stated, it is said to be 14·58. It would appear that by an oversight the rates given for the subdivisions of the colony are the proportions of deaths in each district to the *whole* population of the colony; these figures being, of course, valueless as a test of comparative mortality. It appears from the facts given in the table that the *true* death-rate per 1000 of the population of Hobart was 23·5, and that of Launceston 23·8; these are too high for rates in colonial towns, which should be free from the unhealthy areas which raise the death-rates of cities in the Old World. The death-rate in the Tasmanian country districts in 1886 would appear to have been as low as 9·4; this low rate may probably be partly due to defective registration in sparsely populated districts. It is unsatisfactory to find that "fever," principally enteric or typhoid, is more fatal in Tasmania than in England and Wales. The deaths in 1886 included 47 from this cause, of which 25 occurred in Launceston, 9 in Hobart Town, and only 13 in the rest of the colony. The mortality from the other principal zymotic diseases was decidedly below the English average. Infant mortality from all causes, measured by the proportion of deaths under one year to registered births, was 105 per 1000, comparing most favourably with the rate of infant mortality in England and Wales; it should, however, be noted that, while in the country districts the proportion was only 73 per 1000, it was more than twice as high (152 per 1000) in Hobart Town and Launceston, the chief urban districts. It is evident from these figures that the sanitary condition of the principal Tasmanian towns is not what it might be and ought to be.

THE SERVICES.

WAR OFFICE.—Army Medical Staff: Surgeon-General John O'Nial, C.B., has been granted retired pay (dated June 14th, 1887).

INDIA OFFICE.—The Queen has approved of the following promotions made by the Governments in India:—Surgeon-Major William Roe Hooper (dated March 31st, 1887), and Surgeon-Major John Richardson (dated April 29th, 1887), of the Bengal Medical Establishment, and Surgeon-Major A. Nickson Hojel (dated April 1st, 1887); Surgeon-Major Peter Stephenson Turnbull, M.D. (dated April 1st, 1887), and Surgeon-Major H. Cook, M.D. (dated April 2nd, 1887), of the Bombay Medical Establishment, to be Brigade Surgeons. This cancels the promotion of Surgeon-Major Hojel, from April 2nd, 1887, notified in our columns on May 21st, 1887.

ADMIRALTY.—The following appointments have been made:—Surgeon Penrose J. Barcroft, to the *Malabar* (dated July 2nd, 1887), and Surgeon William R. White, to the *Duke of Wellington*, additional (dated July 2nd, 1887).

ROYAL NAVAL ARTILLERY VOLUNTEERS (Bristol Brigade). Charles A. Wigan, M.D., M.R.C.S., to be Surgeon (dated July 4th, 1887).

ARTILLERY VOLUNTEERS.—1st Gloucestershire: J. Lidderdale, Gent., to be Acting Surgeon (dated July 2nd, 1887).—3rd Volunteer (Kent) Brigade, Cinque Ports Division, Royal Artillery: John Irvine Boswell, M.B., to be Acting Surgeon (dated July 2nd, 1887).—Richard Joseph Bryden, Gent., to be Acting Surgeon (dated July 2nd, 1887).

RIFLE VOLUNTEERS.—1st Volunteer Battalion, the Duke of Cornwall's Light Infantry: Surgeon R. C. M. Pooley, M.D., is granted the honorary rank of Surgeon-Major (dated July 2nd, 1887); Thomas Baxter Carlyon, Gent., to be Acting Surgeon (dated July 2nd, 1887).—1st Dorsetshire: Acting Surgeon W. A. E. Hay, to be Surgeon (dated July 2nd, 1887).—1st Dumbartonshire: William Drysdale, Gent., to be Acting Surgeon (dated July 2nd, 1887).—1st Volunteer Battalion, the Essex Regiment: St. Clair Brockway Shadwell, Gent., to be Acting Surgeon (dated July 2nd, 1887).—4th Volunteer Battalion, the South Wales Borderers: Surgeon and Honorary Surgeon-Major Robert Smythe resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated July 2nd, 1887).—3rd Volunteer Battalion, the Duke of Wellington's (West Riding Regiment): Lieutenant J. F. Arlidge is appointed Acting Surgeon (dated July 2nd, 1887).

THE VOLUNTEER MEDICAL STAFF CORPS.—The London Division: Philip Henry Wbiston, Gent., to be Surgeon (dated July 2nd, 1887).

Correspondence.

"Audi alteram partem."

THE POSITION OF MEDICINE IN THE STATE.

To the Editors of THE LANCET.

SIRS,—Now that the Jubilee week has come and gone, and the list of those deemed worthy of honour is open to our study, it seems a fit time for the medical profession to take stock of the estimate formed of it by the ruling coterie in the State. "Honour a physician with the honour due unto him" has come down to us from nearly 3000 years ago as embodying wisdom, and now in this marked year of our era we have an opportunity of testing how far these ancient opinions on the healing art are recognised under our so-called advanced civilisation. I take the list of honours as a fair index for guidance. The occasion was a special one, and furnished an opportunity for making up any leeway. The profession has not been passed by either as sufficiently weighted with awards or as unworthy of recognition, but duly considered and value assessed; and though the healing art is noble, second to none, and in the opinion of some self-sufficing, yet like other callings some of our members have accepted gifts from the "fountain of all honour," sinking their professional title in that applicable to the rank bestowed; and hence our profession, as to the nation's estimate of it, is fairly gauged by the distributions awarded its members. All professions, judging by acts, accept the honour as something above, and added to, that derived from themselves. What, then, does an analysis of the list reveal as bearing on our present subject?

Excluding promotions in the navy and army and those nursing sisters decorated with the Royal Red Cross, there are about 272 individuals deemed worthy of recognition, and among them we number twelve, six belonging to the civil segment and six to the services, a ratio of 4·4 per cent. Taking the navy and army as expressive of a calling the very opposite to the healing art, we find a ratio of 40 per cent., the medical departments among them reaching only to five. We have no place among the six peers and thirteen baronets; and among the knights commencing with Pryce Jones, Esq., and terminating with mayors of different towns, we have three out of thirty-three. Of the civil division of the Order of the Bath, its highest grade passing us by, we get two out of twelve K.C.B.'s, none out of thirty-one C.B.'s; and in its military division, giving us a similar omission in the highest grade, we have three out of forty K.C.B.'s, and three out of sixty C.B.'s. The Order of St. Michael and St. George, among sixteen colonials, give us one—an M.D. of Ottawa. Hence the healing art is deemed honourable by the State at a percentage of 4, one-tenth of the value of the fighting force; it is not worthy to take a place in the highest grade of any order in existence in our country; its level is with the trades; and former experience repeats the present. The medical profession has no high-paid and titled appointments as the church and law, and hence, acting on the principle advanced in the army, that the combatants are entitled to honours in a higher ratio than medical officers on account of the smallness of the pecuniary remuneration, we should have an excess as compared to others, and this makes the invidiousness of our present position more pronounced. Thus this Jubilee year finds us lowly rated and lowly graded in the bestowal of distinctions; it finds no small number of our military members smarting (rightly or wrongly) under a sense of degradation and unfairness; it finds several in our lower ranks who in the struggle for existence are working for a pittance barely, if at all, above the artisan class. Surely there is food here for reflection and occasion for reasonable discontent, irritation, and a desire at least (to use your own words) for "redress of what is felt to be a grievance," if nothing more.

Does the cause of offence lie in our calling, in ourselves, or in the power that honours? The first may be dismissed, though it must be said that it places the sufferer only under an obligation; its influence is personal rather than general; it is not obtrusive; it makes no appeal to the emotions of the mass as an army does in a victory gained, or as politics in a great liberating measure passed; in its public work it is preventive and silent in working, unseen by the many, not demonstrative; and hence its value and influence are easily overlooked in this busy world and thrust aside. Again, its members are not recruited from the upper strata, from the moneyed or influential ranks—rather from the medium or lower middle class as a rule. They come under the category of self-made men; they have little time or desire or means for social matters; they do not come much under the cognisance of those capable of influencing the inner circle surrounding the throne except as units. Nor are they potent politically. Their main power resides in the position their special education gives them in the world of intelligence, and their influence is probably best seen in those who carry their medical education into other spheres of work than in those who practise the healing art. Again, in the distribution of honours, it would appear, judging by the results, not to be based solely on professional work, the selection, the outcome of a responsible body having the necessary knowledge. In the civil section several have been distinguished by Royalty after services personally rendered; and in the military section seniority has generally determined the result, and the awarder has been the military, not the professional head. Hence it would seem that our calling is not one to prominently thrust itself under the nation's recognition; its members, as a rule, lack the social or political influence to impress the fountain from which honours flow, and the system of awarding leaves much to be desired. These points, however, furnish no excuse for the poor distinction that the medical profession has hitherto enjoyed. Surely the State should have no favouritism in professions or callings, all (if honourable) should stand on the same basis, and awards in ratio to numbers should be mainly based on selection made by the respective heads acting in council.

I presume that the profession regard the present condition as one far from congratulatory. We want to extend our influence socially and politically; we want to raise the standard of our profession, increasing its value and power in the State. Most of us tend to undermine our power by the ease with which we gratuitously give our professional services. We want our ranks recruited more, if possible, from the upper middle stratum, and especially to guard against the numerical swamping of the profession by the entrance of more than can be properly provided for. This is unquestionably a great rock ahead, increasing competition and the struggle for existence not probably affecting those in the first rank or those of middle age, but vitally touching those about, or in the future, to enter, and increasing the numbers earning a miserable pittance, degrading in tendency, besides reducing the influence of the profession as a whole, and allowing the State to fill its posts with men at a lower rate. It is certainly the best for all that this severe competition for work and its pay should be prevented, that entries should not be double the vacancies as at present; and to this end it would seem well that the Colleges should use their authority, and by raising the required standard increase the difficulties, so diminishing the number passed

in, while augmenting the value of the passed professionally and socially. Both of these points we want, if the profession is to have due weight in the State, and such are the thoughts which have passed through the brain of

July, 1887. ONE OF ITS MEMBERS.

"ACUTE EPIGASTRIC PAIN IN PUERPERAL ALBUMINURIA."

To the Editors of THE LANCET.

SIRS,—I beg to enclose extracts from a private letter recently received from Dr. Goss, giving additional evidence of the value of the symptom I alluded to in a recent issue:—

"Roxbury, Boston, Mass., U.S.A., April 28th, 1887.

"'MY DEAR SIR,—In the report of a case of 'Acute Epigastric Pain in Puerperal Eclampsia,' published in THE LANCET of the 2nd inst., you do me the honour to refer to a case published by me in the *Boston Medical and Surgical Journal* in 1884. Towards the close of your article you say: 'The above cases, five only in number, are all I have been able to meet with.' It may interest you to know that since the publication of my case others of a similar nature have been observed in this vicinity. In the *Boston Medical and Surgical Journal*, vol. cxi., Dec. 18th, 1884, p. 580, Dr. C. F. Withington gives an account of the malady in question, and in vol. cxiii. of the same publication, Sept. 24th, 1885, p. 299, the late Dr. F. H. Lombard published a case reported to the Boston Obstetrical Society. ..... In spite of all reasonable care, the presence of renal trouble will sometimes escape our notice till a catastrophe occurs. Dr. Lombard reported that the urine of his patient had been examined monthly up to within a fortnight of her decease, without discovering any abnormality, and there was nothing in the condition of my patient to lead me to suppose her situation to be critical.

"The renal affection must be at times very rapid in its development, and the microscopical examination of the urine in both Dr. Lombard's case and my own confirms this statement. The urine resembles that often found in the acute nephritis of scarlet fever.

"Trusting, &c. ..... Yours, very truly,

"FRANCIS W. GOSS.

"John Phillips, Esq., B.A., M.B., M.R.C.P."

I may also say that I have received letters from two other practitioners detailing single cases in which this very important and too-little noticed symptom was well marked.

I am Sirs, yours truly,

Harley-street, W., July 6th, 1887. JOHN PHILLIPS.

"A DOCTOR'S INCOME."

To the Editors of THE LANCET.

SIRS,—My good friend Dr. Paget Thurstan, who is better qualified than many hospital physicians, has succeeded in raising a lively discussion on this—to us doctors—most interesting question. Permit me, as a man who knows the world better I suspect than some of my brethren, to make a few remarks on the subject. The general public care little what a doctor does or is, provided they know his name well; they draw no distinction between consultants so-called and general practitioners, and, most naturally, we should do the same in their place—get the best advice at the lowest fees. As long as hospitals, clubs, and dispensaries offer good treatment at low fees the public will accept all they can get, and no wonder. Our medical brethren in general quite forget that clubs do not exist to provide medical treatment; their primary object is to supply their members with so much per week in sickness, and certain benefits at death. The medical attendance is thrown in in a secondary kind of way. Now, as long as twenty practitioners offer themselves for a club surgeoncy, as long as club doctors holding the highest qualifications are ready to go *twelve miles* to see club patients—I speak of facts—the public would be lunatics to offer more than the 2*s*., 4*s*., or 5*s*. generally paid for medical attendance. I do not wonder at young men taking such work. They want practice and are glad of anything to do, but I am surprised at eminent men offering themselves. A friend of mine, a senior surgeon to a great provincial hospital, held nearly up to his death many clubs. I do not know why. At one time he held forty clubs. Again, take hospitals: from my neighbourhood several rich people, far better off than many of the local doctors, have gone as in-patients to London hospitals of late years. As long as great hospitals compete for inmates and gladly receive any and all comers, the public naturally think (if they trouble themselves at all in the matter) that the staff are remunerated somehow and sufficiently. One remedy would be for our great consultants to resign their hospital appointments earlier in life; a second, a more systematic weeding out of hospital patients. At this moment there are several poor sufferers in my neighbourhood whom I would gladly send away for severe operations, but they cannot face the cost of the journey; at the same time rich shopkeepers, large farmers, and prosperous business men, who can get up to town, are eagerly received again and again. Moreover, I must demur to the singular statement that consultants are a different class to general practitioners. The distinction between barristers and solicitors will not continue; public opinion is against it. Consultants are not always better qualified or more competent than general practitioners. With the exception of part of the staff of certain London hospitals, there are hundreds of consultants (so-called) whose education, diplomas, and standing are precisely the same as those of good general practititoners. One of our local club doctors is a London University scholar. The corporations can do nothing; Parliament cannot and will not interfere; and as for the Medical Council, what right has it to interfere? Combination will effect nothing. Our leading men must protect themselves from downward competition, and our younger men must have more self-respect.

I am, Sirs, yours truly,

June, 1887. AN OLD OXONIAN.

A THERAPEUTICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—I sincerely hope that the scheme of a Therapeutical Society, as mooted by Dr. A G. Bateman, will be carried out to a successful issue. To general practitioners, intimately concerned as they are with the actual and immediate treatment of disease, such a society would be of inestimable value. As a matter of fact, a great number of practitioners scan the medical papers with avidity that they may pick up any therapeutical crumbs which perchance might fall from those in high places, and truly they are, as a rule, but crumbs, the feast itself generally consisting of pathology or etiology. In other words, the science of therapeutics has not received the same amount of attention as other branches of medicine have, and is still, as your correspondent states, in a "chaotic condition," from which, however, a Therapeutical Society would go far in helping it to emerge. Trusting that the idea may be taken up with the enthusiasm it deserves, I remain, Sirs, yours truly,

Hastings, July 7th, 1887. J. STENSON HOOKER.

VANS AND INFECTION.

(*From a Correspondent.*)

AN outbreak of measles has been traced at Grantham to some travelling showmen and hawkers who attended the fair recently held in the town. The case affords a good illustration of the danger to the public health which results from the extremely unsatisfactory character of our sanitary system so far as it affects our nomadic population. This question was discussed at considerable length during the sittings of the Housing of the Working Classes Commission two years ago. It was then shown that the van population—under which generic term was included that numerous class who inhabit movable dwellings, whether vans or tents—were subject to no sanitary regulations whatever. A magisterial decision, that a van was not a house, had been upheld by the High Court, with the result that none of the enactments which regulated the inhabitants of houses affected this vagabond section of the community. In some parts of the country, it is true, where van towns had sprung into existence, some attempts had been made to cope with the difficulty. At Woodford, for instance, where the squatters ejected from Epping Forest made a settlement, the local board succeeded in compelling them to have a supply of water. But it is doubtful whether this was a legal proceeding, and the settlement, of course, still re-

mained independent of the bye-laws of the board. And this was the state of things all over the country. As to the condition of these people, it was shown to be admirably adapted to breed pestilence. Cases of typhoid fever and small-pox were frequently occurring among them, vaccination, owing to their migratory habits, being unknown, while they furnished instances of overcrowding of the worst type. An attempt was made, it will be remembered, to bring vans within the Canal Boats Act, but the House of Commons committee reported against the proposal, and Mr. George Smith of Coalville, has since been indefatigable in urging the necessity for a "Movable Dwellings Bill." It is, however, in the meantime, of considerable importance that it should be remembered that sundry of the recommendations of the Royal Commission with regard to vans and tents were carried into effect by the Housing of the Working Classes Act, 1885. That statute, for instance, extended the Public Health Act, 1875, and the Sanitary Act, 1866, so as to include any structures used for human habitation. It declared, in so many words, that if any tent, van, or shed were so overcrowded as to be injurious to the health of the inmates, it should be deemed to be a nuisance. Sanitary authorities and nuisance authorities were further empowered to make bye-laws for promoting cleanliness in this class of dwellings, and for ensuring their being kept in a habitable condition and preventing the spread of infectious disease by those inhabiting them. Any person duly authorised by a sanitary authority or by a justice of the peace was enabled, if he had reasonable cause to suppose either that there was a contravention of the provisions of the Act or bye-laws or that any person was suffering from any infectious disorder, to enter any such structure between the hours of six in the morning and nine in the evening, and any person obstructing him in the performance of this duty was liable on summary conviction to a fine of forty shillings. From all this it will be seen that pending further legislation there is plenty of authority under the Act of 1885 for taking all necessary precautions to prevent infectious diseases being introduced into towns by this means. It is true that the commissioners expressly limited their recommendations to those cases in which van towns were located near populous places, and did not propose to interfere with the nomadic population. But there is no such limitation in the words of the Acts which apply equally to travelling vagabonds and settlers. The Grantham authorities intend, it is said, to inspect caravans in future before they are permitted to enter the town; and, as we have shown, they possess full authority to carry out such a precaution. Bye-laws which have been framed under the Act have been carried out to much good purpose in Battersea and Wandsworth and in a few other districts, but in comparison with their obvious utility these provisions of the statute have been so little used that it may be doubted whether their existence or effect are generally known. It is certainly of the first importance, in view of its influence upon the public health, that no pains should be spared to render the itinerant masses amenable to sanitary regulations, and it therefore seems to be very desirable to call attention to the existing statutory powers in that behalf.

MANCHESTER.

(From our own Correspondent.)

ROYAL INFIRMARY.

A DEATH from hydrophobia has recently occurred in the wards of the infirmary; the patient had been bitten by a dog a month previously in one of the outlying districts of the town. It is not long since another death took place in a patient at the opposite side of the city. It is satisfactory to note that the authorities are now enforcing the regulations for the proper control of all dogs throughout the city. Jubilee Day passed without any very serious accident happening; a few minor casualties were brought in, together with one or two persons suffering from the effects of the heat or alcohol, or the two combined. A catastrophe caused by the sudden falling of some business premises furnished some half-dozen patients recently, when two persons were killed. This unfortunate affair has had the good effect of directing attention to the need for increased supervision by the authorities, not only of new buildings, but over alterations of existing premises. Another case under treatment in the infirmary has been of interest, not so much from the nature of the accident as from the manner in which it was inflicted. A man at one of the theatres became so carried away by the acting that he jumped from the gallery on to the stage to render assistance to the heroine against the evil designs of the villain of the piece, in attempting which he broke his leg and had to be taken to the infirmary.

PRESENTATION TO DR. WATERS.

At the annual meeting of the Lancashire and Cheshire branch of the British Medical Association, held at Stockport, a presentation was made to Dr. Waters of Chester, consisting of a service of silver plate, in token of recognition of his services in connexion with the work entailed by the last piece of medical legislation. Subsequently the members proceeded to the Jubilee Exhibition at Old Trafford, where they dined and spent an exceedingly pleasant evening together. While speaking of the exhibition, it may be remarked that, owing to the occurrence of various accidents &c., amongst the huge numbers of visitors to this most successful of exhibitions, the committee have engaged the services of a qualified surgeon to be always on the spot, and many of the employés and attendants have been undergoing a course of "ambulance lectures."

MANCHESTER DEATH-RATE.

THE LANCET of June 25th contains a short article on the high mortality prevalent in Manchester, both during the last year and for some years past. The health authorities here are certainly not ignorant or unmindful of this unsatisfactory position of our city among the large towns of the country, but there are one or two facts which ought to be borne in mind when comparing Manchester with other places. In the first place, the density of the population is greater here than in any other town except Liverpool; and secondly, and perhaps of more importance still, Manchester, as represented by the municipal boundary, is, as far as the resident population is concerned, almost a city of cottages and poor property, and contains in excess that section of the community amongst whom the highest death-rates always prevail. The large warehouses and business premises contain no residents.

THE MAYOR.

The comparatively sudden death of the Mayor (Mr. Alderman Curtis) just before the Jubilee rejoicings was deplored by all. It is certain that had he lived he would have received the honour of knighthood, as has the Mayor of the neighbouring borough of Salford. For many years Mr. Curtis took much interest in the management of the affairs of the Royal Infirmary, and held the position of chairman of the Convalescent Hospital at Cheadle, where he will be much missed.

OWENS COLLEGE.

June 17th was "Associates' Day" at Owens College, when a large number of visitors assembled in the chemical theatre to hear the annual report, &c. The Council have elected twenty-one graduates to the associateship—i.e., eight in science, one in medicine, and five in arts of the Victoria University, three in science and one in medicine of the London University, two in arts of the Cambridge University, and one in arts of the Oxford University. Many old medical students in the College during the years 1873 to 1877 will learn with regret of the early death of Mr. J. B. Perrin, who during that time was demonstrator of anatomy. He was himself a Manchester student, and afterwards held posts in London at King's College and in the College of Surgeons, prior to his appointment here, since resigning which he has had a large practice at Leigh, near Wigan.

June 28th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

THE WATER SUPPLY OF NEWCASTLE.

IN view of the present dry season the water supply of the city of Newcastle has lately come to the front, and a meeting of the special committee of the Corporation has recently been held on the subject. It was mentioned that the new reservoir at West Hallington might be soon completed, which would give a storage of 700,000,000 gallons. It was

shown at the meeting that the water supply to Newcastle and Gateshead is about 15,000,000 gallons daily, of which 11,000,000 gallons are drawn from the water stored in the reservoirs and 4,000,000 gallons from the Tyne. The company, seeing that owing to the dry weather the quantity of water in store was rapidly decreasing, got the pumping engines at Wylam ready for use a month since, and a fortnight ago commenced pumping from the Tyne, and this water is delivered by a separate system of pipes to manufactories, and does not mix with the water supplied for domestic use. At the present time about 4,000,000 gallons per day are being pumped from the river, the pumping power being equal to 6,000,000 gallons a day. The quantity of water in store in the reservoirs on the 29th ult. was more than 1,000,000,000 gallons, which is equal to a supply of about 120 days, so that the people of this district need not fear a water famine.

THE DURHAM COUNTY ASYLUM.

A long report has been presented from the visiting justices of the Sedgefield Asylum respecting the crowded condition of that establishment. The visitors had anticipated that the institution might answer its purposes for some years longer without further additions under ordinary circumstances, but the action of the Sunderland guardians in demanding that all their chronic insane should be admitted into the asylum had upset their calculations, and, in consequence, they had been compelled to enter into arrangements for the reception by another asylum of 150 patients from Sedgefield for two years. The visitors regretted this, as the duty of an asylum appeared to them to be the *cure and treatment* of insanity rather than the custody of the insane. In view of this state of matters the visitors made various suggestions, one of which was the erection of a new asylum in the northern part of the county of Durham for 500 patients, at a cost of £75,000.

THE BLIND POOR OF NEWCASTLE AND GATESHEAD.

On Saturday last the Society for the Home Teaching of the Blind were enabled by the kindness of friends to convey the blind poor of Newcastle and Gateshead, to the number of about 170, in brakes, for a day's outing in the Armstrong Park, where they were supplied with refreshments and entertained with music; not only this, but the men were measured in the Park for trousers and the women for dresses, as a Jubilee gift from the kind friends of the Society. The blind guests were conveyed home to their several houses without a single accident to mar the day's enjoyment.

THE LEEDS WORKPEOPLE'S JUBILEE GIFT.

The workpeople of Leeds have contributed £500 as a Jubilee offering, which is to take the form of an ambulance carriage for the Leeds Hospital. It is to be constructed to carry four stretchers, two with wheels and two slung from the roof. The interior is convertible by loose cushions and backs into suitable beds. It is to be light enough for one horse to draw it short distances; a pole and bar for a pair of horses is also supplied complete, with easy springs and indiarubber axles, sun blinds, lamps, and all the latest improvements.

Newcastle-on-Tyne, July 4th.

DUBLIN.

(From our own Correspondent.)

UNIVERSITY OF DUBLIN.

AT a meeting of the University last week, the degree of Doctor of Medicine (*honoris causâ*) was conferred upon William Tennant Gairdner, Sir James Paget, Sir Thomas Spencer Wells, Sir John Simon, and Edward Waters.

JUBILEE HONOURS.

It is stated that the list of Irish Jubilee honours will not be announced publicly for three or four weeks; and in the interval perhaps the Government may see the folly and injustice of refusing to medical men in this country what has already been granted to their brethren in the sister countries. The busy tongue of rumour has it that at least two medical knights will receive distinctions in honour of the occasion, and I sincerely trust that the statement may be correct.

JUBILEE WARDS: NATIONAL CHILDREN'S HOSPITAL.

The two new Jubilee wards, styled respectively "Victoria" and "Albert Victor," which were inaugurated last week by H.R.H. Prince Albert Victor, are now open for the reception of patients. On Monday last the twenty-four beds were for the first time utilised. Although the hospital is situated in the city, the situation is very open, and, so far as ventilation and light are concerned, nothing could be better than it possesses in these particulars. A sum of £2000 is required, of which about £1000 has already been subscribed. I am confident that the energy and enthusiasm of Mr. L. Hepenstal Ormsby, the surgeon to the hospital, will succeed in enlisting the sympathies of the charitable, and obtain for a valuable institution the amount still required.

MERCER'S HOSPITAL.

On Monday last the Vice-Chancellor had before him the case of Mr. Edward Stamer O'Grady, an eminent Dublin surgeon, against the governors of Mercer's Hospital and Dr. C. F. Knight, in which he sought an order restraining the defendants, until the hearing of the action, from removing the plaintiff from his position as surgeon and governor of the hospital. Defendants asked for an adjournment, which was agreed to, an undertaking being given by them not to take the action which was sought to be restrained, pending the hearing of the cause. Certain of the governors who dissent from the board were also represented by counsel. There is a probability that the case may not be heard during the present sittings.

EPIDEMIC OF MEASLES IN DUBLIN.

For the past three months measles has been very prevalent in Dublin, and the number of deaths from this affection unusually numerous. For example, during the last five weeks the deaths from measles have amounted to eighty-four, as contrasted with four deaths during the first twelve weeks of the present year.

A child seven years of age died in the Waterford Workhouse last week from sunstroke.

Dublin, July 5th.

MEDICAL TRIAL.

PALMER *v.* MALLET.

IN the Chancery Division of the High Court of Justice, this case came before Mr. Justice Chitty. It raised a question of importance to the medical profession. It appeared that the defendant, a medical practitioner, had in 1885 entered into an agreement to act as assistant to Messrs. Palmer and Hall, two medical practitioners practising together in partnership at Newtown, Montgomeryshire. Messrs. Palmer and Hall having dissolved partnership and continued practising in Newtown separately, the defendant entered into the service of Hall, and the plaintiff, Palmer, complained that this was a breach on the defendant's part of the agreement, which was to the effect that the defendant should not directly or indirectly, or either alone or in partnership with or as assistant of any other person or persons, or otherwise, set up or carry on the profession of a surgeon, &c., at or within ten miles of Newtown, without the consent in writing of Hall and Palmer, their executors, administrators, or assigns. The defendant submitted, *inter alia*, that the agreement was a contract with Palmer and Hall jointly, and not a several contract with the plaintiff Palmer, and that the partnership being at an end he was at liberty to disregard the agreement. Mr. Romer, Q.C., and Mr. Alan Stewart appeared for the plaintiff; and Mr. Aston, Q.C., and Mr. Yate Lee for the defendant. Mr. Justice Chitty said that, in his opinion, the plaintiff could sue on the agreement without joining Hall, and granted an interim injunction restraining the defendant from acting in the way complained of. On the application of the defendant, the operation of the injunction, with the consent of the plaintiff, was suspended for a month.

BLIND EDUCATION.—Mr. H. Warmington, a blind young gentleman, has passed the "previous" examination in Cambridge University, obtaining a first class in part 1 and in part 2, and a second in the "additional subjects." Mr. Warmington was educated in the Worcester Blind College.

THE COLLEGE ELECTION.

THE voting at the above election, which took place in the Library of the Royal College of Surgeons on Thursday afternoon, the 7th inst., resulted as follows:—

Mr. Jonathan Hutchinson ...	120,	including	0 plumpers
Mr. Alfred Willett...	106	,,	27 ,,
Sir T. Spencer Wells, Bart. ...	77	,,	2 ,,
Mr. R. Brudenell Carter ...	67	,,	14 ,,
Mr. John Couper	59	,,	6 ,,

Mr. Jonathan Hutchinson and Sir T. Spencer Wells, Bart., were therefore duly re-elected, and Mr. Alfred Willett was elected to the vacancy caused by the retirement of Mr. John Wood.

There appeared to be less interest in the election than is usual; only 199 Fellows recorded their votes. One paper only was declared invalid from informality.

There was the usual exhibition of pathological specimens and preparations illustrative of human and comparative anatomy which have been added to the museum during the past year. Most of these are of special interest.

Medical News.

UNIVERSITY OF OXFORD.—At a congregation held on the 23rd ult. the following degrees were conferred:—

DOCTOR IN MEDICINE.—George Alfred Buckmaster, Magdalen.

BACHELOR IN MEDICINE.—William Wallis Ord, University; John Arkle Waring, New; Frank Sorell Arnold, Percy John Frederick Lush, and Lovell Drage, Christchurch; Ernest Le Cronier Lancaster, St. John's; William Williams and Charles Hubert Hands, non-collegiate; Frederick William Andrewes (Fellow), Pembroke; George Lindsay Turnbull, Magdalen.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following having passed their final examinations for the Letters Testimonial of the College under the old scheme regulations have been admitted Licentiates:—

James Burke, James Cahill, William J. Corrigan, Isaac Duncan, William V. Furlong, Nicholas John Gossan, William J. Mullany, Vincent Nash, Henry F. C. Pilcher, Matthew J. Dingley, Henry M. Rainsford, James M. Tidmarsh, and Benjamin P. Young.

Nineteen entered, one was absent, and five were rejected.

The undernamed have been admitted Fellows:—

F. A. B. Daly, A.M.D. | D. D. Redmond.

UNIVERSITY OF DUBLIN.—The following degrees were conferred last week by the Chancellor of the University:—

BACHELOR IN SURGERY.—Walter James Buchanan, Joseph Chambers, John Galwey Cooke, Parke Shaw Dobson, George Faris, Harry Fayle, John Hugh Roberts Glenn, St. George Gray, Christopher James Healy, Robert William Henry Jackson, Rev. Henry Simpson Lunn, Patrick Colley Pounder, Samuel William Robinson, Henry George Smeeth, John Henry Du Bedat Whalte, Charles William Henry Whitestone.

BACHELOR IN MEDICINE.—Henry Kingamill Abbott, Samuel William Allworthy, William Sydney Bagot, Joseph Chambers, James Clarke, Thomas Willoughby Cole, John Galwey Cooke, John Cuffey, Edwin Lindsay Dunn, Harry Fayle, Edward Barrington Ffennell, Dionysius Lionel Fitzgerald, William Samuel Tomkins Foley, St. George Gray, Charles Grey-Edwards, Christopher James Healy, Robert Warren Herrick, Wensley Moore Jennings, John Freeman Knott, Thomas William Gordon Kelly, George Lane Mullins, Samuel William Robinson, William James Weir, Charles William Henry Whitestone, Humphry Worthington.

MASTER IN OBSTETRICS.—Hugh Woods.

DOCTOR IN MEDICINE.—Robert Samuels Archer, Arthur Wyndowe Willert Baker, Henry St. John Brooks (*stip. cond.*), William Morton Harman, Rev. Henry Simpson Lunn, Henry Brougham Pope, Richard Blayney Wrightson.

SOCIETY OF APOTHECARIES.—The following gentlemen having satisfied the Court of Examiners as to their knowledge of the Science and Practice of Medicine, Surgery, and Midwifery, received certificates entitling them to practise as Licentiates of the Society on June 30th:—

Anderson, Ernest Chester, Chaplaincy, Bodmin.
Cresny, Arthur Zell Clavdon, Hayesden, Wallington Surrey.
Doidge, Maurice John, Lifton, Devon.
Miles, Charles Henry, Stantonbury, Bucks.

ON the 29th ult. a concert was given at Exeter in aid of the funds of the Devon and Exeter Hospital.

THE first annual celebration of the Leeds Hospital gala was held on the 2nd inst., and proved highly successful.

THE annual general meeting of the trustees of the Salop Infirmary was held on the 18th ult. The business transacted was mainly of a formal character.

NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.—The tenth block of houses of this hospital will be inaugurated by H.R.H. the Princess Beatrice on July 21st next.

MR. WILLIAM P. BAIN, late medical officer for the East District of the Poplar Union, has after forty years' service been granted a superannuation allowance of £121 per annum.

ON the 3rd inst. the annual demonstration of the friendly societies in Sunderland took place, the collection on behalf of the medical charities of the town resulting in the receipt of a highly satisfactory amount for distribution.

THE existence at Leicester of several dogs suffering from rabies has been brought to the notice of the local police authorities, many of the inhabitants having been attacked by the animals.

VACCINATION GRANT.—Mr. J. B. Emmerson, public vaccinator for the Stotfold district of the Biggleswade Union, has been awarded the Government grant for efficient vaccination (first time).

THE AFTER-CARE ASSOCIATION for poor and friendless female convalescents on leaving asylums for the insane will hold its annual meeting on Thursday next, at 3 P.M., at 83, Lancaster-gate, Hyde Park, Dr. Hack Tuke in the chair.

ADELAIDE HOSPITAL, DUBLIN.—The following prizes have been awarded:—Hudson Scholarship: Gold medal and £30, Thomas E. Dunne. Hudson Prize: Silver medal and £10, Christopher Healy. Medical Prize: C. W. Healy. Surgical Prize: R. J. W. Mawhinny.

ON the 28th ult. Mr. James Shaw, of Ardwick, near Manchester, was found dead in his house, which he occupied alone. The cause of death, which had occurred about ten days before the discovery of the body was made, was due to valvular disease of the heart.

UNIVERSITY COLLEGE, LONDON.—On Saturday, July 2nd, the Council of the College made the following appointments:—Dr. W. J. Williams, F.R.C.P., Professor of Midwifery; Dr. H. Charlton Bastian, F.R.S., Professor of Medicine; Dr. W. J. Mickle, F.R.C.P., Lecturer on Mental Diseases; and Dr. W. R. Gowers, F.R.S., a Professor of Clinical Medicine.

CASES OF POISONING.—Nine children living at Pollokshaws, near Glasgow, were on Tuesday last seized with illness of an acute character, in consequence, it is supposed, of having picked up and eaten portions of a white substance, possibly arseniate of soda, which they mistook for alum. Two of the children have since died, the others are recovering.

THE Howard Association have issued an appeal for assistance to enable them to publish widely in the course of next year three works, which their secretary, Mr. Tallack, has prepared, bearing on prison discipline, and the treatment and prevention of crime. The works embody important facts, figures, and observations collected by the society during the past twenty years.

SANITARY INSTITUTE OF GREAT BRITAIN.—At the anniversary meeting to be held on Thursday, July 14th, at 3 P.M., Sir Douglas Galton, F.R.S., will present the medals and certificates awarded to the exhibitors at the exhibition held at York, after which ceremony an address will be delivered by Dr. G. V. Poore, entitled "The Shortcomings of some Modern Methods of Sanitation."

BEQUESTS.—The late Captain Douglas, formerly of the Scots Fusilier Guards, has bequeathed £500 to the Westminster Hospital, £200 to King's College Hospital, £200 to the Home for Sick Children, Great Ormond-street, and £300 to St. Mark's Hospital, City-road.—Mr. Richard Kemmis has left £100, and the Countess Dowager of Pembroke £100, to Sir P. Dun's Hospital, Dublin.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY.—At a meeting of the committee of management of this hospital, held on the 2nd inst., it was reported that during the half-year ending 30th ult. 1027 in-patients had been admitted, 750 discharged as improved, 28 as no better, and 7 at their own request; 234 remained on the books. The number of out-patients treated during the same period was 72, and of these 34 were discharged as improved. The financial report was satisfactory.

DR. NAISMITH, whose services to the Ayrshire Yeomanry Cavalry as instructor in ambulance drill for mounted troops were specially noticed by the inspecting officer, Colonel Lord Ralph Kerr, at the recent review of the regiment, has improvised a stretcher made with four swords and a piece of canvas, the swords, two on each side, being fastened at the centre by two simple clamps, carried in the pouch belt.

CITY PROVIDENT DISPENSARY AND SURGICAL APPLIANCE ASSOCIATION.—The tenth anniversary dinner of the supporters of this charity was held on the 29th ult., the Earl of Dartmouth presiding. During the ten years of its existence there have been 27,257 attendances at the dispensary and 2056 visits paid at homes. In the surgical appliance branch upwards of 7400 instruments have been supplied. During the evening the secretary announced subscriptions amounting to about £200.

EAST SUFFOLK AND IPSWICH HOSPITAL.—The anniversary court of the governors of this institution was held on the 29th ult., when it was reported that 712 in-patients had been admitted, against 707 in the preceding year, and 4423 out-patients, against 3998. The ordinary revenue account showed an excess of expenditure of £370 over the income, which, added to an adverse balance in the previous year of £209, left a deficiency of £579. The report was adopted, and the court was adjourned for three weeks in order to allow the board of management to report as to the propriety of electing an assistant house-surgeon to the institution.

MEDICAL NOTES IN PARLIAMENT.

Supply of Drugs to Prisons.

IN the House of Commons on the 30th ult., in reply to Mr. Picton, Mr. Matthews stated that in April, 1886, tenders were invited for the supply of drugs and sundries to Her Majesty's prisons; that the accepted tender was at the rate of 12½ per cent. discount off the list of prices supplied by the department; that one of the rejected tenders was at the rate of 20 per cent. discount; and that the firm sending in the lower tender had been in the habit of supplying several great hospitals, and furnished testimonials of competency and trustworthiness from upwards of thirty well-known medical men in various parts of Great Britain and Ireland; and that the reason assigned for the payment of a price 7½ per cent. higher than that for which the drugs could have been obtained was that it was held, and very reasonably, by the medical inspector of the department that contractors who have been tried and tested as supplying pure drugs should be preferred unless some considerable advantage was to be gained by not doing so. The difference of price referred to in the question would not for the whole of the prisons amount to more than £95. He saw no reason to interfere with the practice of the department, which was, he believed, similar to that followed in other public departments and large hospitals.

The Vaccination Acts.

In reply to Mr. C. Hanning, Mr. Matthews stated that he was not prepared to advise any special mode of treatment for persons imprisoned under the vaccination laws.

The Medical Staff in India.

On the 1st inst., Sir W. Forster asked the Under-Secretary of State for India whether it was the case that an executive officer of the medical staff in India, who officiated for less than one month as deputy surgeon-general in the absence of the deputy surgeon-general on sick leave or furlough, received no allowances for the period, although he performed the duties in addition to his other duties; whether in such an instance the "half-staff" of the appointment reverted to the State; whether the acting officer would be held pecuniarily liable in the event of loss of stores or other mistakes; whether officers officiating on the military (combatant) staff in a similar way would draw the "half-staff" for broken periods; and why the difference was made in the case of the medical officers.—Sir J. Gorst replied that the Secretary of State had not yet obtained the official information from India which was necessary to enable him to reply to this question. It had been asked for.

Dispensary Doctors in Ireland.

On the 4th inst., in reply to Mr. T. Harrington, Mr. A. J. Balfour stated that it was usual to select as constabulary medical attendant the dispensary officer of the district when he was found to be the most eligible, but not otherwise. The rule giving a doctor a certain priority of claim to the medical charge of the police situate within his dispensary district was cancelled in 1883.

Army Medical Officers.

The following is the text of the question put a few days ago by Dr. Farquharson, and of the answer by Mr. Stanhope:—Whether the Secretary of State for War is aware that considerable dissatisfaction exists in the Army Medical Department as the result of recent examinations for promotion from the rank of Surgeon-Major to that of Brigade Surgeon; whether it is the case that the unsuccessful competitors heard for the first time after their failure that they were not to be allowed a second chance, but must be passed over when their time for promotion comes; whether this rule applied equally to combatant officers; and whether, in consideration of the fact that several medical officers of long service and proved capacity presented themselves for examination on foreign service, and under unfavourable conditions, in the belief that another opportunity would be afforded them of satisfying the requirements of the board, he will consider whether he cannot relax the rule in their favour.—Mr. Stanhope, in reply, said, "I am not aware that there is considerable dissatisfaction, but I have understood that certain Surgeons-Major have felt aggrieved at not being allowed a second chance, although it does not appear that they had any right to expect it. Promotion to the rank of Brigade Surgeon is strictly by selection, and the fact of passing the examination does no more than remove the presumption of disability for promotion. The selection would be made from those Surgeons-Major of marked ability who had passed the test; and it is to be inferred that if any officer required more than an examination before he could prove his ability, it is unlikely that he would be selected as of conspicuous ability for the higher rank. The case of combatant officers is altogether dissimilar."

On the 4th inst., Dr. Farquharson asked the Secretary for War whether it was true that the commissions of army surgeons were dated after leaving Netley, whereas surgeons in the Indian army and also in the navy had their commissions dated—the Indian surgeons from the day of joining at Netley, and the naval surgeons from the day of joining at Haslar; whether this gave both Indian and naval surgeons an advantage of four months' seniority over the army surgeons who passed the same competitive examination at Burlington House with them; and whether he would undertake to do away with this distinction between the medical officers commissioned for duty in the three public services of the Army, Navy, and India.—Mr. Brodrick said that the facts were as stated. Whether the army surgeons experience any practical inconvenience from the antedate given to Indian and naval surgeons might be doubted. He thought that the best way to remove the anomaly would be for the Admiralty and the India Office to follow in future appointments the practice of the War Office.

On the 5th inst., Dr. Farquharson asked the Secretary of State for War whether he would take means to ascertain the ground of the present feeling of discontent among the medical officers of the army with their anomalous position, which, they allege, affords them neither relative nor substantive rank in the army; and whether he would enable them collectively to state their grievances to him and to suggest the desired remedies.—Mr. E. Stanhope said that he had already received a deputation from the civil branch of the medical profession on this subject, and that it would be a breach of military discipline for military medical officers to unite in any collective expression of complaint.

Water-supply at Albany Barracks, Parkhurst.

On the 5th inst., in answer to Dr. Cameron, Mr. E. Stanhope stated that the ordinary water-supply of Albany Barracks, Parkhurst, is derived from the surface water of an adjoining forest, but after being collected the water is passed through ample filtration beds. This water has been repeatedly analysed, and after filtration pronounced good and wholesome, but recently, from the long drought and other causes, the supply has become insufficient and of inferior quality. In April there were three cases of typhoid fever, and in the absence of any other known insanitary condition it is supposed that the water was the cause of the outbreak. The pipes of the Carisbrooke Water Company pass the barracks, and temporary arrangements for a supply from their main have been entered into. The question of the future supply will be carefully considered.

Surgeon-Major Sandford Moore.

In reply to Dr. Robertson, Mr. E. Stanhope stated that the Medical Director-General and the Medical Board had reported that Surgeon-Major Moore's ailment (loss of vision) was aggravated by his service.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BREESE, THOMAS T., M.B., C.M.Aber., has been appointed Medical Officer for the Puddletown District of the Dorchester Union.

CONWAY, DANIEL, Lic. Surg. Dub., has been elected Medical Officer to the County Tipperary Dispensary, vice Douty, deceased.

DUNLOP, SHULDHAM H., M.D., M.Ch. Roy. Univ. Irel., has been appointed House-Physician to the Belfast Royal Hospital, vice Caldwell, resigned.

EMMERSON, J. B., M.D.Durh., M.R.C.S., has been promoted from the Stotfold to the Biggleswade District of the Biggleswade Union.

HARGRAVE, HERBERT J., M.B., C.M.Aber., has been appointed Medical Officer for the First District and for the Workhouse of the Risbridge Union.

JAMES, ALFRED, M.R.C.S., L.S.A., has been appointed Medical Officer to the Biggleswade Union Contagious Diseases Hospital, and to the Biggleswade Union Workhouse and Infirmary, vice C. P. Stevens, F.R.C.S., L.S.A., resigned.

JONES, H. R., M.B., B.C., B.A.Cantab., B.Sc.Lond., has been appointed House-Physician to the Liverpool Royal Infirmary.

NESBITT, ROBERT ARCHER, L.R.C.S., L.R.C.P.Ed., has been elected Medical Officer for the Donaghadee Dispensary District, vice Stuart, resigned.

NOAD, ERNEST, M.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer for the Beerferries District of the Tavistock Union.

PIRIE, JOHN, M.B., C.M.Ed., has been elected House-Surgeon to the Whitehaven and West Cumberland Infirmary, vice Harris, resigned.

READ, H. G., M.R.C.S., L.R.C.P., L.S.A., L.D.S.Eng., has been appointed one of the Dental Surgeons to the Metropolitan Free Hospital.

ROECKEL, W. J., F.R.C.S.Eng., M.B., B.S.Lond., has been appointed Honorary Surgeon to the Bolingbroke Home Hospital, Wandsworth-common, S.W.

WARKE, C. L., L.K.Q.C.P.I., has been appointed House-Surgeon to the Liverpool Royal Infirmary.

WILLIAMS, C. L., M.B., C.M.Edin., has been appointed House-Surgeon to the Liverpool Royal Infirmary.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

CAPE COPPER MINING COMPANY, South Africa.—Assistant Surgeon. Earnings about £300 per annum; lodgings free, but no rations.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Resident Clinical Assistant.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary £70 per annum, with board and lodging.

FEMALE LOCK HOSPITAL, Harrow-road, W.—House-Surgeon. Salary £100 per annum, and board and lodging.

HARTLEPOOLS HOSPITAL.—House-Surgeon and Secretary. Salary £60 per annum, with board (exclusive of beer, wine, and spirits), lodging, and attendance.

PENRITH UNION.—Medical Officer. Salary £38 per annum, with extra fees for surgical operations, midwifery, and vaccination cases.—Vaccination Officer. A fee of 3s. in respect of each case of successful primary vaccination.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, S.E.—Physician.

SEDBERGH UNION.—Medical and Vaccination Officer for the Dent District. Salary £20 per annum, with vaccination fees.

YORKSHIRE COLLEGE, Leeds.—Professor of Anatomy.—Demonstrator of Anatomy. Stipend £150.

Births, Marriages, and Deaths.

BIRTHS.

BROWNE.—On the 5th inst., at Norland-place, W., the wife of J. W. Browne, M.B., of a son.

COLES.—On the 4th inst., at Sydney House, Sutton-court-road, Chiswick, the wife of Donald Coles, M.D., of a son.

DRAGE.—On the 6th inst., at Hatfield, Herts, the wife of Lovell Drage, M.A., M.B., B.S.Oxon., of a son.

PHELPS.—On the 26th ult., at Ashford, Kent, the wife of Philip Phelps, M.R.C.S., of a son.

PHIPPS.—On the 7th ult., at Cape Town, the wife of Surgeon E. V. A. Phipps, Army Medical Staff, of a son (stillborn).

MARRIAGES.

BEALE—HANSON.—On the 27th ult., at St. Saviour's Church, Paddington, W., Thomas Miles Beale, M.R.C.S., to Maud Agnes Hanson, of Elgin-avenue, Maida-vale, W.

DERRY—HART.—On the 30th ult., at St. James's Church, Notting-hill, W., Bartholomew Gidley Derry, M.R.C.S., L.R.C.P.Lond., to Constance Georgina, fourth daughter of Mr. Henry Hart, of Norland-square, London, W.

DOBSON—WAY.—On the 5th inst., at St. Stephen's Church, Ealing, Leonard Charles Talbot Dobson, M.B.Lond., to Florence Sydney, daughter of T. E. Way, of Stanmer, Castlehill.

FENWICK—MANSON.—On the 6th inst., at the Church of St. Bartholomew-the-Less, City of London, by the Rev. Thomas Swan, M.A., Vicar of Thoroton, assisted by the Rev. William Ostle, M.A., Hospitaller and Vicar of the Parish, Bedford Fenwick, M.D., M.R.C.P., to Ethel Gordon Manson, younger daughter of the late David Davidson Manson, and of Mrs. Storer, of Thoroton Hall, Notts.

GEOGHEGAN—DEALY.—On the 5th inst., at St. James's Church, Kidbrooke, Alfred Osmond Geoghegan, M.D., Medical Staff, to Maud, sixth daughter of John R. Dealy, Esq., of Walton Lodge, Blackheath, Kent.

PLIMMER—ADERS.—On the 30th ult., at Norwood, by the Rev. S. A. Tipple, Henry George Plimmer, M.R.C.S. Eng., L.S.A. Lond., F.R.M.S., to Bertha Helena Aders.

THOMSON—STROMEYER.—On the 29th ult., at Holy Trinity Church, Twickenham, David George Thomson, M.D., to Melina Louise, fifth daughter of Charles Stromeyer, of Strawberry-hill, Twickenham.

DEATHS.

BARTLET.—On the 4th inst., at Ipswich, Alexander Henry Bartlet, M.D., F.R.C.S., in his 87th year.

CONOLLY.—On the 30th ult., at Church-hill-villas, Wood-green, Charles Thomas Conolly, L.R.C.S.I., L.S.A., aged 55.

CRICHTON.—On the 28th ult., at his residence in Maule-street, Arbroath, James S. Crichton, M.D.Ed., L.R.C.S.Ed.

POTTER.—On the 1st inst., at Cullompton, Devon, Samuel Reginald Potter, B.A., M.B., L.M.R.H.D., second son of the late Rev. L. Potter, Rector of Dromard, Co. Sligo, Ireland, aged 60 years, thirty of which he practised at Cullompton. Friends will please accept this intimation.

SHARPLEY.—On the 4th inst., at Louth, Lincolnshire, suddenly, Thomas Sharpley, M.D., M.R.C.S., Coroner for the parts of Lindsey, aged 55.

WRIGHT.—On April 27th, at 2, Carlton-terrace, Wynyard-square, Sydney, N. S. Wales, from apoplexy, Ellen, beloved wife of Horatio G. A. Wright, M.R.C.S.Eng., L.S.A.Lond., aged 59.

WRIGHT.—On May 10th, at 2, Carlton-terrace, Wynyard-square, Sydney, N. S. Wales, after many years of patient suffering, Annie, beloved daughter of Horatio G. A. Wright, M.R.C.S. Eng., L.S.A.Lond., aged 35.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 7th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
July 1	30·41	S.E.	62	58	119	80	56	...	Hazy
,, 2	30·26	W.	72	63	103	81	59	...	Hazy
,, 3	30·18	W.	75	67	122	91	62	...	Hazy
,, 4	29·96	W.	75	67	127	91	64	...	Fine
,, 5	29·92	N.	63	58	106	71	58	·06	Cloudy
,, 6	30·26	N.E.	60	54	111	75	54	...	Cloudy
,, 7	30·14	W.	68	63	123	79	59	...	Fine

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

URGENT CALLS AND THE CENSURE OF JURIES.

AT an inquest in Bradford lately the jury were very severe on the medical man summoned for not attending before the death of the patient. Only medical men know how misleading often is the account given of cases, and how often it errs in conveying an exaggerated notion of the case. Only they, too, can realise how difficult it is to decide between two urgent calls. The coroner in this instance remonstrated with the jury, who toned down their verdict considerably. We have no wish to apologise for undue delay in fulfilling a promise to see a patient. Rather we would urge increased promptitude, and where cases cannot be seen immediately, to refer them to other medical men.

Mr. H. A. Allbutt.—It is well and seemly for medical men, as a general rule, to act as substitutes for each other in unexpected emergencies. Such amenities increase the respect of medical men for each other, and that of the public for the profession. But the general rule will not cover all cases; and we are not prepared on the strength of an *ex parte* statement to say that the gentleman was not entitled to act independently.

A Victim.—We do not give medical advice. The ordinary medical attendant should be consulted.

W. S. W.—The licence is not accepted anywhere for the purpose name.

THE PROPOSED REGISTRATION OF FOREIGN DEGREES.

To the Editors of THE LANCET.

SIRS,—There are some points in connexion with the above subject to which I should like to draw attention. First, it seems reasonable to suppose that no Englishman would go abroad for his degree if he could get one as easily at home. Secondly, he would not seek such a degree unless he believed that at least in the eyes of the public it implied some professional superiority over his untitled brother practitioners. Assuming this to be correct, it would follow that his brother practitioners, and through them their British licensing bodies, would be injured. Also, it seems only reasonable that any supervision which the General Medical Council considers necessary for the British qualifying bodies should apply with at least equal force to those of foreign countries; and I would earnestly urge that it must be unjust to register any foreign degree, unless in the opinion of the General Medical Council it implies a higher professional knowledge than any British qualification which does not confer a similar degree. I am, Sirs, yours faithfully,

July, 1887. BRITON

EDINBURGH UNIVERSITY.

THE Dean of the Faculty of Medicine of the University calls our attention to an inaccuracy of date of graduation given in our correspondent's letter last week. That ceremonial is always held on the 1st of August (except when that day falls on a Sunday), and not on the 2nd of that month, as stated in the letter referred to.

J. M. F.—While we sympathise with our correspondent, we do not think anything would be gained by a reference to a discussion which took place three years ago, and which we noticed very fully at the time. Slowness in promotion is an inevitable occasional result of the system adopted in our army, but we do not see how it can be avoided, except at a cost which we fear no Minister would feel justified in proposing to Parliament, or which, if proposed, would be sanctioned.

H. F. P.—Béclard died on February 16th last, and a sketch of his life and labours was published in THE LANCET of Feb. 19th. His chief work was entitled "Traité de Physiologie Humaine," which has reached the seventh edition.

General Practitioner will find an answer to his question in our last issue, page 50.

W. G. D. is thanked.

CLIMATE AS A THERAPEUTIC AGENT IN PHTHISIS.

To the Editors of THE LANCET.

SIRS,—It is with considerable interest that I have read Dr. Alexander Lindsay's article in THE LANCET of April 30th. Among the dry inland resorts Dr. Lindsay mentions that the Orange Free State is probably the best, but states certain drawbacks. My object in writing is to make known a town which enjoys all the climatic advantages of the Free State, and which is free from the objections against it mentioned by Dr. Lindsay. I mean the town of Aliwal North, which is the terminus of the Eastern System of railways of the Cape of Good Hope. It is in rail communication with the port of East London, distant some 400 miles, which is a great advantage to invalids proceeding up country. It stands at an altitude of about 4500 ft. It has excellent hotels, and living in them is cheap (about 10*s.* 6*d.* per diem). In the neighbourhood are fine hot mineral springs. It is pleasantly situated on the Orange River, which there forms the boundary between the colony and the Free State. It was only a month ago I met a clergyman there, who had come out to die, returning home after twelve months' residence in Aliwal, as he stated, "a new man." South Africa is not fashionable as a health resort; but I feel convinced that Aliwal has but to be known to be appreciated. I am, Sirs, yours truly,

W. J. P. ROWE.

Maseru, June 3rd, 1887. Medical Officer, Basutoland.

TORQUAY AND ITS WATER-SUPPLY.

Dr. Karkeek, medical officer of health for Torquay, writes: "Just at this time, when so many towns are driven to great extremities for want of water, Torquay is enjoying the constant supply system, with plenty for street, garden, and sanitary purposes, and enough stored in its reservoirs to last until Christmas. The town has spent enormous sums in procuring a large supply of pure water, and now it is reaping the advantages of its judicious expenditure."

Anxious.—It is not our practice to answer communications from laymen, especially when they involve charges against medical practitioners which rest on *ex parte* statements.

Dr. H. W. Phillips.—We cannot decide until we see the paper.

VOMITING PERSISTING FOR YEARS.

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent who has treated unsuccessfully a case of vomiting for thirteen years, I beg to state that I have had a similar patient under my care at the St. George's Dispensary for many years, whom I have treated with partial success with koumiss (alone) as food, sherry as a stimulant, and ingluvin, from five to ten grains, before each meal between thin slices of bread-and-butter, or in a spoonful of water. I am, Sirs, yours truly,

Richmond-terrace, S.W., July 4th, 1887. HENRY SUTHERLAND.

HOW TO TAKE CASTOR OIL.

THE *Monthly Magazine of Pharmacy* quotes the following suggestion as to taking castor oil from a French source:—"Take a half-glass of frothy, sparkling beer, mix the dose of oil with it, and whip it up so as to make it froth strongly. The oil thus becomes intimately mixed with the froth, and if only the latter is drunk, he says, neither the taste of the oil nor that of the beer is perceived."

Quærens.—Mr. Crookes appears to have found that seven, or perhaps nine, kinds of atoms are present in the substance known as yttrium. Other illustrations of the hypothesis of the same observer will be found described in an article which appeared in our impression of the 26th of February last.

Mr. J. A. Lund.—Some comments on the case will be found in THE LANCET of April 2nd last.

THE ABUSE OF BROMIDE OF POTASSIUM.

DR. GRELLETY, writing in *Le Practicien*, mentions that he has frequently met with cases where diabetics, a class of persons who, as he remarks, are especially prone to read medical literature bearing on their malady, having discovered that bromide of potassium has been highly recommended in diabetes, have commenced to prescribe this drug for themselves, and have taken enormous quantities, thus doing themselves a great deal of harm. Dr. Grellety is convinced that a good many of the boils which are met with in diabetic patients, and which are generally attributed to the disease, owe their origin rather to the prodigious doses of bromide which the patients have been taking surreptitiously. He remarks that M. Bernier is in the habit of always prescribing arsenic combined with bromide in the proportion of a drop of liq. arsenicalis to each drachm of bromide, in order to neutralise the undesirable tendency of the latter to produce cutaneous affections. He concludes by advising all practitioners before prescribing bromide to examine carefully into the condition of the patient's skin, circulation, digestion, and kidneys; and, if he find evidence of deficient transpiration or any urinary trouble, to proceed with great caution. Again, it is well to endeavour to obtain information as to whether the patient has ever taken bromide, and, except in cases of urgency, small doses only should be given at the commencement.

Mr. John J. A. Ray.—We can understand our correspondent feeling hurt at the letter he forwards us, and we quite believe that he acted in good faith in printing the testimonials and list of operations, &c. The form of the latter is, however, somewhat startling, and hardly to be approved in connexion with an application for an assistantship or locum tenency.

Alpha.—The case is weak. We would not recommend legal proceedings.

"PHOSPHATE OF LIME TREATMENT IN LOCAL TUBERCULOSIS."

To the Editors of THE LANCET.

SIRS,—In your Vienna correspondent's report, on the 2nd inst. (p. 44), of the above treatment he omits to state that in the prescription No. 1 for injections the solution *must* be sterilised. There is also an omission of a line from the formula. After the words "Deinde sensim adde" should follow "Acid. phosphor. q. s. ad solution. perfect. filtra; adde: Acid. phosphor. dil., 0·6," &c. (*Wien. Med. Pr.*, Juni 12, 1887, p. 830). Herr Ernst Freund says: "The solutions which Dr. Kolischer used as injections were, in accordance with his wish, most carefully sterilised. The acid phosphate of calcium having been separated into phosphoric acid and secondary phosphate of calcium (which itself separates) by means of boiling, a considerable precipitate in the solution No. 1 was apparent during the process of sterilising, which, however, after standing several hours at the ordinary temperature of the room, again dissolved." (*Op. cit.*) I am, Sirs, your obedient servant,

New Cavendish-street, W., July 4th, 1887. WM. MARTINDALE.

"LE SCALPEL."

WE have to congratulate our Belgian contemporary on having completed its fortieth year. *Le Scalpel* is published at Liège under the able editorship of Dr. A. Festraerts, and always takes up a strong position on behalf of the profession when it is in danger of being imposed upon. It also speaks with no uncertain sound on the high standard medical men are bound to maintain in a moral as well as in a scientific sense.

Mr. A. W. Stirling (Grays).—An abstract of the thesis would no doubt be interesting. It should not exceed three columns in length.

A MIDWIFERY CASE.

To the Editors of THE LANCET.

SIRS,—On May 3rd last I attended Mrs. B—— in her seventh confinement. On the birth of the child's head I discovered that the cord was twisted once round its neck, and on trying to bring it over the head I found that I could not on account of its shortness. The pains were very strong. Fearing inversion of the uterus or sudden detachment of the placenta from the uterine walls, I asked the patient to cease bearing down. At the same time the head and shoulders, which were born, were kept firmly back. I then called for a pair of scissors, and divided the cord, previously tying the end next the umbilicus. Had I not acted promptly in this case the placenta might have been either forcibly torn from its attachment, and thus have caused post-partum hæmorrhage, or inversion might have occurred. I did not measure the cord.

I am, Sirs, yours very truly,

Peckham, July 2nd, 1887. ED. T. YEATES, L.R.C.S.I., &c.

ONE EFFECT OF CHEAP QUININE.

IT is said that the present low price of quinine and cinchona has caused the collection of the bark in Guayaquil to be so unremunerative that this industry has been almost given up there.

C. M.—The holder of the degrees mentioned has no *legal* claim to be styled "Dr."

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Virchow, Berlin; Dr. H. Sutherland, London; Mr. Sydney Jones; Dr. Hassall, Lucerne; Mr. Lockwood, London; Dr. Farquharson, M.P.; Dr. J. W. Ogle, London; Dr. Thudicum, London; Mr. Slater, Newcastle-on-Tyne; Dr. Fraser, Edinburgh; Mr. Horsburgh, London; Mr. Bilton Pollard, London; Mr. Etherington, London; Mr. Lascelles Scott, London; Dr. Leith Napier, London; Dr. Julius Pollock, London; Mr. Bland, Colchester; Miss Forest, Nottingham; Messrs. Brinsmead and Co., London; Dr. R. Lee, London; Dr. J. Shaw; Messrs. Mason and Co., Bristol; Dr. H. W. Phillips, Bolton; Messrs. Mottershead and Co., Manchester; Dr. G. Harley, London; Messrs. Wilkinson and Son, Brighton; Mr. H. W. Burke, Singapore; Messrs. Greenwood and Co., Manchester; Mr. J. G. Laffan, Wyndham, W.A.; Dr. Sinclair Thomson, London; Mr. T. Holmes, London; Mr. Kilvington, West Hartlepool; Mr. Yeates, Peckham; Mr. Frewer, London; Dr. Norman Kerr, London; Mr. G. H. Williams, Lockwood; Mr. J. D. Greenlees, Stone; Mr. Karkeek, Torquay; Dr. Ledlard, Carlisle; Dr. J. Phillips, London; Rev. E. L. Hicks, Manchester; Mr. F. M. Pierce, Manchester; Mr. A. B. Kelly, London; Mr. Martindale, London; Mr. W. Anderson, London; Mr. A. W. Stirling, Grays; Dr. Armstrong, South Shields; Dr. J. O. Sinclair, Edinburgh; Mr. J. S. Hooker, Hastings; Mr. Morgan, Stafford; Mr. Harbord, Leeds; Mr. Woolhead, Huddersfield; Mr. Fraser, Plymouth; Mr. Somerville, Edinburgh; Mr. Lee, Exeter; Mr. Wardley, Buxton; Dr. Liveing, London; Mr. Birchall, Liverpool; Mr. Alcan, Paris; Mr. Skelton, Sheffield; Mr. Robinson, Sedburgh; Mr. Scott, Manchester; Mr. Taylor, London; Mr. Stone, Westgate-on-Sea; Mr. Moore, Bradford; Mr. Woodcock; Mr. J. L. Mitchell, London; Briton; M.D., London; Doctor, Sheffield; J. B.; A. H. D.; Prospectus, Southsea; Medicus, Sheffield; An Unqualified Assistant; M.D., Norwood; D.D., London; M.B.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. MacKay, Esk; Mr. Pinn, Derby; Dr. Humphreys, London; Messrs. Lee and Martin, Birmingham; Mr. Somerville, Lexham; Mr. Plimmer, Upper Norwood; Mr. Geddes, London; Mr. Guest, Melsonby; Messrs. Harris and Co., Birmingham; Miss Jones, Chelfont St. Peters; Messrs. Read and Co., Bristol; Mr. Macintosh, Edinburgh; Messrs. Richards and Co., London; Dr. Fussell, Brighton; Dr. Page, Hartlepool; Mr. Van Praagh, London; Mr. Gant, London; Dr. Gunn, Chicago; Mr. John Ward, London; Mr. Thompson, Watton; Mrs. McCall; Messrs. Blake and Co., Leeds; Dr. J. Vinarjah, Jamkhandu; Messrs. Steel and Jones, London; Dr. White, Malmesbury; Mr. Atkins; Messrs. Kilner and Co., London; Dr. Needham, Gloucester; Messrs. Warren and Co., Bristol; Mr. Jones, Treherbert; Captain Blount; Mrs. Forest, Nottingham; Dr. Aubin, St. Helier's; Mr. Hoggatts, Smallheath; Mr. Briggs, Cambridge; Mr. Horner, Teignmouth; Messrs. Johnson and Co., Southport; Mr. Potter, Columpton; Messrs. Maclachlan and Co., Edinburgh; Mr. Entwistle, Manchester; Mr. Laban, West Bromwich; Dr. Munro, Oldham; Mr. Harris; Dr. Parsloe, High Hampton; Mr. Fewster, Hull; Mr. Elliot, Carlisle; Messrs. Porteous and Co., Glasgow; Mr. Youldon, Whitechapel; Messrs. Fox and Co., Glasgow; Mr. O'Connor, London; Mr. Darlaston; Mr. Walker, Derby; Mr. Hornibrook, London; Mr. Hadding, Leicester; Siward, London; A. H., Ipswich; Secretary, Exeter; Medicus, Hammersmith; W. D., Leicester; Surgeon, Ramsbottom; F. K., London; X. Y. Z., Hackney; O., Burningham; Matron, Ventnor; G. P., Leeds; Stentor, Bradford; W., Blackburn; M.D., Norwood; Cara; Sister A.; Delta; Secretary, Chelsea; Skit, Edinburgh; Holiday, London; T. O. W., Penmaenmawr; Theta; Sterling, Bayswater; H. R., London; M.D., Battersea; W. H. L., Blackburn; L.R.C.P.; Locum, Liverpool.

Ayr Observer, Melbourne Age, Glasgow Evening Times, Haddingtonshire Advertiser, Vanguard, Kingston Express, Sydney Morning Herald, &c., have been received.

Medical Diary for the ensuing Week.

Monday, July 11.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, July 12.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, July 13.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, July 14.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, July 15.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, July 16.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

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Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.